

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 801

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

CHI-CHUNG WANG, TERRY C. EISENSMITH, CHARLES E. KIERNAN
AND ROBERT L. MILANESE

Junior Party,¹

v.

GARY R. TUCHOLSKI

Junior Party,²

v.

RICHARD T. CATALDI, PATRICK D. HEIN, HENRY J. HEIRIGS
AND JOHN C. LEO (PATENT)

Junior Party,³

¹ Application 07/730,712, filed July 16, 1991. Assignors to Duracell International Inc.

² Application 07/641,394, filed January 15, 1991. Assignors to Eveready Battery Co., Inc., St. Louis, MO.

³ Application 07/504,504, filed April 4, 1990, now U.S. Patent No. 5,059,895, issued October 22, 1991. Assignors to Eastman Kodak Co.

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RICHARD T. CATALDI, PATRICK D. HEIN, HENRY J. HEIRIGS
AND JOHN C. LEO (REISSUE)

Junior Party,⁴

v.

JAMES R. BURROUGHS AND ALAN N. O'KAIN (PATENT)

Senior Party,⁵

JAMES R. BURROUGHS AND ALAN N. O'KAIN (REISSUE)

Senior Party.⁶

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FINAL HEARING: MAY 29, 1997

Before URYNOWICZ, RONALD H. SMITH, and SOFOCLEOUS, Administrative
Patent Judges.

SOFOCLEOUS, Administrative Patent Judge.

⁴ Reissue Application 07/942,973, filed September 10, 1992. Accorded Benefit of U.S. Applications 07/504,504, filed April 4, 1990, and 5,059,895, issued October 22, 1991. Assignors to Eastman Kodak Co.

⁵ Application 07/308,210, filed February 8, 1989, now U.S. Patent No. 5,015,544, issued May 14, 1991. Assignors to Strategic Energy, Ltd.

⁶ Reissue Application 07/963,915, filed October 20, 1992. Accorded Benefit of U.S. Application No. 07/308,210, filed February 8, 1989, now Patent No. 5,015,544, issued May 14, 1991. Assignors to Strategic Energy Ltd.

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FINAL DECISION WITH RESPECT TO THE PARTY TUCHOLSKI

The subject matter of this interference relates to a battery with a strength indicator. The count of this interference is as follows:

Count 1

A battery having a label with an integral voltmeter; wherein the voltmeter comprises:

- A) a dielectric layer;
- B) a conductive layer above or below the dielectric layer; and
- C) a temperature sensitive color indicator layer in thermal contact with the conductive layer, characterized in that 1) the conductive layer has i) sufficient heat generating capacity to affect a change in the temperature sensitive color indicator layer and ii) sufficient thermal insulating means under one of its surfaces to overcome heat sinking when the voltmeter is in contact with a battery having an electrically conducting housing and 2) the voltmeter includes means for forming an electrical switch with the electrically conductive battery housing.

The party Wang et al.'s claims 22 to 24 and 43 to 63, the party Tucholski's claims 1 to 35 and 46 to 70, the party Cataldi et al.'s patent claims 9 to 29, the party Cataldi et al.'s reissue claims 9 to 25 and 28 to 40, the party Burroughs et al.'s patent claims 1 to 11 and the party Burroughs et al.'s reissue claims 13 to 51 correspond to the count.

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In Interlocutory Order No. 2, dated May 10, 1996 (Paper No. 494), the Administrative Patent Judge (APJ) listed and acknowledged the 91 preliminary and miscellaneous motions and requests, the various oppositions, replies thereto and comments⁷ to various oppositions and replies, filed by the parties. In addition, the APJ opened preliminary statements and ordered their service. At the same time, the APJ placed the junior parties Tucholski and Cataldi et al. under an order pursuant to 37 CFR 1.640(d)(3)⁸ to show cause why judgment should not be entered

⁷ In an order, dated December 12, 1994 (Paper No. 77), the APJ in charge of the interference at that time authorized the parties to file comments in support of or in opposition to a motion directed at another party.

⁸ This section reads, in part, as follows:

§ 1.640 Motions, hearings and decision, redeclaration of interference, order to show cause.

* * * * *

(d) An administrative patent judge may issue an order to show cause why judgment should not be entered against a party when:

* * * * *

(3) The party is a junior party whose preliminary statement fails to overcome the effective filing date of another party.

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against them in view of the fact that the dates alleged in their preliminary statements did not overcome the filing date of the senior party Burroughs et al.

The junior parties Tucholski and Cataldi et al. filed responses to the show cause order. The purpose of this final hearing⁹ is to determine whether the junior parties Tucholski and Cataldi et al. have shown sufficient cause to avoid the entry of judgment against them. This decision addresses the issues raised by the party Tucholski.

In its memorandum (Paper No. 505) in response to the show cause order, the party Tucholski urges that a favorable decision on its preliminary motions for judgment against the party Burroughs et al. would vitiate the show cause order under 37 CFR § 1.640(d)(3). If the senior party Burroughs et al.'s claims are held to be unpatentable as urged in the aforesaid preliminary motions, then the senior party Burroughs et al. would be removed from the interference. The interference would then proceed as a three party interference with the party Cataldi

⁹ The accompanying final decisions address the issues raised by the party Cataldi et al. and by the party Wang et al.

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et al. as the senior party. In that circumstance, the party Tucholski's preliminary statement would overcome the effective filing date of the party Cataldi et al.

The memorandum also includes a request for final hearing to review preliminary motions (Paper Nos. 81 and 82) for judgment against Burroughs et al. and a motion (Paper No. 506) for testimony. The APJ granted the request for final hearing to the extent that this case would be set down for final hearing to consider such matters as may be pertinent under 37 CFR § 1.655 and granted the motion for testimony to the extent that the party Tucholski was authorized to introduce into evidence only that evidence relied upon in its two preliminary motions for judgment (Paper Nos. 81 and 82) and in its replies (Paper Nos. 257 and 258). The APJ's order states, "[n]o other evidence may be introduced." See Section IV of Interlocutory Order No. 4, dated July 19, 1996 (Paper No. 534).

The parties Wang et al., Tucholski, Cataldi et al. and Burroughs et al. took testimony, filed records and briefs, and appeared through counsel, at final hearing.

ISSUES

The junior party Tucholski's opening brief raises the following issues:

1. Whether the parties' claims corresponding to the count are unpatentable over prior art.
2. Whether the senior party Burroughs et al.'s claims corresponding to the count are unpatentable under 35 U.S.C. § 112.
3. Whether the APJ abused his discretion by (i) scheduling two final hearings, (ii) not permitting the party Tucholski additional discovery, (iii) permitting the senior party Burroughs et al. to raise its schedule B motions at the first final hearing, and (iv) not scheduling a time for the party Tucholski to file a reply to the other junior parties opposition briefs.
4. Whether the Board should retain the party Tucholski as a party to this interference regardless of the outcome of the first final hearing.

In Interlocutory Order No. 10, consideration of the party Tucholski's miscellaneous motion (Paper No. 665) to excuse the belatedness of its second preliminary motion (Paper No. 666)

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for judgment, and its motion (Paper No. 660) to compel was deferred to final hearing provided that the party Tucholski files a paper within five days after final hearing requesting consideration of the motions. Such a paper (Paper No. 794) was filed. Accordingly, the following motions are also before us:

5. Whether the party Tucholski's miscellaneous motion under 37 CFR §§ 1.635 and 1.645(b) to file a belated motion for judgment should be granted.

6. Whether the party Tucholski's second preliminary motion under 37 CFR § 1.633(a) for judgment that the parties' claims are unpatentable should be granted.

7. Whether the party Tucholski's motion to compel should be granted.

The senior party Burroughs et al.'s opening brief raises the following issue with respect to the party Tucholski:

8. Whether the party Tucholski's claims corresponding to the count are unpatentable over prior art.

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Unpatentability of the Party Burroughs et al.'s Claims
over Prior Art--Issues (1, 5 and 6)

Issue (1)

The party Tucholski's opening brief raises the following five grounds for unpatentability against the parties' claims:

A. The parties' claims corresponding exactly to the count, i.e., Wang's claim 54, Tucholski's claim 62, Cataldi's patent claim 20 and Burroughs' reissue claim 37, are anticipated by Kiernan, U.S. Patent No. 4,723,656, by Parker, U.S. Patent No. 4,747,020, or by the prior art BatCheck® tester (Tucholski's Exhibit Nos. 46A and 47A (TX 46A and 47A)). [See pages 2 to 8 and 85 of the opening brief.]

B. The parties Wang's claims 43 to 53 and 55 to 63, Cataldi's patent claims 9 to 19 and 21 to 29, Cataldi's reissue claims 21,

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23 to 25, 28 and 29, Burroughs' reissue claims¹⁰ 16 to 29, 33 to 36, 38 to 40 and 43 to 51, are anticipated by Kiernan, U.S.

¹⁰ The party Tucholski does not assert that the party Burroughs et al.'s patent claims 1 to 11, and Burroughs et al.'s reissue claims 13 to 15, 30 to 32, and 42 are anticipated by Kiernan, U.S. Patent No. 4,723,656.

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Patent No. 4,723,656. [See pages 8 to 18 of the opening brief and Addendum A to the opening brief.]

C. The parties Wang's claims 43, 45 to 48, 50, 51, 53 to 59, 62 and 63, Cataldi's patent claims 9, 11 to 14, 16, 17, 19 to 23, 28 and 29, Cataldi's reissue claims 9, 11 to 14, 16, 17, 19 to 23 and 28 to 40, Burroughs' reissue claims¹¹ 16, 18, 20, 22 to 24, 26, 28, 29, 33, 35 to 37, 39, 41, 42, 44, 46, and 48 to 50 are anticipated by Parker, U.S. Patent No. 4,747,020, or by the prior art BatCheck tester.® [Pages 19 to 28 of the opening brief]

D. The party Wang's claims 22 to 24 are anticipated by Sterling, U.S. Patent No. 1,497,388. [Pages 29 to 34 of the opening brief]

E. All of the parties' claims corresponding to the count are obvious over Sterling, U.S. Patent No. 1,497,388 in view of Kiernan, U.S. Patent No. 4,723,656, Parker, U.S. Patent No.

¹¹ The party Tucholski does not assert that the party Burroughs et al.'s patent claims 1 to 11 or its reissue claims 13 to 15, 17, 19, 21, 25, 27, 30 to 32, 34, 38, 40, 43, 45, 47, and 51 are anticipated by Parker, U.S. Patent No. 4,747,020, or by the prior art BatCheck tester.

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4,747,020, or the prior art BatCheck® tester. [See pages 35 to 62 of the opening brief and Addendum B to the opening brief.]

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Preliminary Matters

I

On page 62 of its opening brief, the party Tucholski makes a qualified admission that its claims corresponding to the count are unpatentable over the relied upon prior art. However, 37 CFR § 1.637(a) does not provide for any qualified admission but rather presumes that the prior art cited in a motion is applicable to the moving party unless there is included with the motion an explanation as to why the prior art does not apply to the moving party. Nowhere does the party Tucholski's brief or the party Tucholski's underlying preliminary motion for judgment explain how the party Tucholski's claims corresponding to the count are patentable over the cited references.

The foregoing lack of explanation as required by 37 CFR § 1.637(a) constitutes an admission that the cited references disclose (35 U.S.C. § 102) or render obvious (35 U.S.C. § 103) the party Tucholski's claims corresponding to the count. See Guglielmino v. Winkler, 11 USPQ2d 1389 (Bd. Pat. App. & Int.

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1989), rev'd on other grounds, slip op. at 17 USPQ2d 1175 (Fed. Cir. 1990) and Fiddes v. Baird, 30 USPQ2d 1481 (Bd. Pat. App. & Int. 1993). Whether the cited references constitute "prior" art is not admitted by the party Tucholski. However, a review of the party Tucholski's preliminary statement shows that it contains no date of invention which antedates the dates of these references. Thus, the references are prior art to the party Tucholski and the party is not entitled to its claims corresponding to the count based on the admission.

II

Insofar as the grounds A to E urge that the claims of the party Wang et al. and the party Cataldi et al. are unpatentable over prior art, the party Tucholski's opening brief is dismissed.

In accordance with Interlocutory Order No. 9, pages 12 and 13, the grounds for unpatentability entitled to consideration are those raised in motions by the junior parties Wang et al., Tucholski and Cataldi et al. attacking the right of the senior

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party Burroughs et al. to remain in this interference and those raised in motions filed by the senior party Burroughs et al. attacking the right of the junior parties Tucholski and Cataldi et al. to remain in this interference.

An APJ's interlocutory order is presumed to have been correct and the party attacking that order has the burden of showing an abuse of discretion. 37 CFR § 1.655(a). An abuse of discretion may be found when (1) the decision is clearly unreasonable, arbitrary or fanciful, (2) the decision is based on an erroneous conclusion of law, (3) the findings are clearly erroneous, or (4) the record contains no evidence upon which the APJ rationally could have based the decision. Cf. Abrutyn v. Giovannello, 15 F.3d, 1048, 1050-51, 29 USPQ2d 1615, 1617 (Fed. Cir. 1994). Nowhere does the party Tucholski's opening brief request review of the APJ's Interlocutory Order No. 9 or show that the APJ's order constitutes an abuse of discretion to the extent that it limits the issues of unpatentability to be raised by the party Tucholski at this final hearing.

III

Insofar as the brief¹² raises the matter of whether the parties' claims are anticipated by Kiernan, U.S. Patent No. 4,723,656,¹³ by Parker, U.S. Patent No. 4,747,020, or by the prior art BatCheck tester (grounds A to C above), the matter is not entitled to any consideration. The matter is not raised in the party Tucholski's underlying preliminary motion (Paper No. 81)¹⁴ for judgment, which the party Tucholski seeks review of at final hearing. The matter of anticipation by Kiernan is raised in the reply¹⁵ to the opposing parties' oppositions to the motion; the matter of anticipation by the Parker patent and the prior art BatCheck® tester is raised for the first time in the opening brief. Pursuant to 37 CFR § 1.655(b), a party cannot

¹² Addendum A to the party Tucholski's brief sets forth the basis upon which the party Tucholski relies for anticipation.

¹³ We note that the Kiernan patent was cited or referenced in each party's application involved in this proceeding.

¹⁴ A copy of this motion appears in the Tucholski record at pages 565 to 587 (TR 565 to 587).

¹⁵ A copy of the reply appears at TR 840 to 876. The matter of anticipation over Kiernan appears at TR 854 to 856.

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present a new argument at final hearing for granting a motion if the new argument is not included in the original motion, unless the party shows good cause as to why the argument was not earlier presented. Bayles v. Elbe, 16 USPQ2d 1389, 1391 (Bd. Pat. App. & Int. 1990); Payet v. Swidler, 207 USPQ 168, 170 (Bd. Pat. Int. 1980); and Fredkin v. Irasek, 397 F.2d 342, 346, 158 USPQ 280, 284 (CCPA 1968). Accordingly, the brief is dismissed as to this matter.

Even if this matter were timely raised in the preliminary motion, the motion would have been denied. Anticipation requires that all the elements of the claimed invention be described in a single reference. In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990). We agree with the party Burroughs et al. that the Kiernan and Parker patents and the prior art BatCheck® tester fail as an anticipation of the party Burroughs et al.'s claims, because they do not disclose either a battery strength indicator attached to

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the side of a battery housing or any type of switch attached to the side of the battery housing.

III

Insofar as the brief raises the matter of whether the parties' claims are unpatentable over Sterling,¹⁶ U.S. Patent No. 1,497,388 in view of the prior art BatCheck® tester¹⁷ (the third alternative rejection raised in ground E), the brief is not entitled to consideration. This matter is not raised in the party Tucholski's underlying preliminary motion (Paper No. 81) for judgment. As we noted above, pursuant to 37 CFR § 1.655(b), a party cannot present at final hearing a matter which is not raised in a motion unless the party shows good cause why the matter was not properly raised by a timely filed preliminary motion. Bayles v. Elbe, 16 USPQ at 1391; Payet v. Swidler, 207

¹⁶ The Sterling patent is cited in the Burroughs et al. patent specification and in the Wang et al. application disclosure.

¹⁷ This is the device illustrated in Parker, U.S. Patent No. 4,737,020. See the testimony of Mr. Alan B. Palmer at pages 750 and 751 of the party Wang et al.'s record (WR 750 and 751). Thus, the assertion that the party Burroughs et al.'s claims are unpatentable under 35 U.S.C. § 103 over Sterling in view of the BatCheck® device would be cumulative to the assertion that the claims are unpatentable over Sterling in view of Parker.

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USPQ at 170; and Fredkin v. Irasek, 397 F.2d at 346, 158 USPQ at 284. No such showing was made by the party Tucholski.

Accordingly, the Tucholski brief is dismissed insofar as it raises the matter of the unpatentability of the party Burroughs et al.'s claims over Sterling in view of the prior art BatCheck® tester.

Even if this matter were timely raised in a preliminary motion, the motion would have been denied for the reasons set forth in our opinion re: issue (1), infra.

IV

In view of the foregoing, the only issue on patentability over prior art entitled to consideration is ground E to the extent indicated above in Section III.

Issue (1)

The brief urges in ground E that the party Burroughs et al.'s claims corresponding to the count are obvious under 35 U.S.C. § 103 over Sterling, U.S. Patent No. 1,497,388 in view

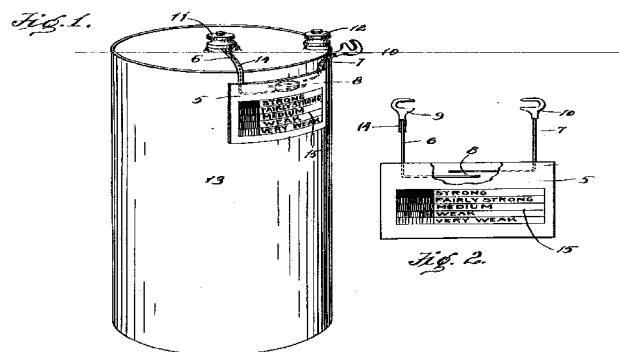
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of either Kiernan, U.S. Patent No. 4,723,656, or Parker,¹⁸ U.S. Patent No. 4,747,020. As the moving party, the party Tucholski has the burden of proof by a preponderance of the evidence on the motion. Kubota v. Shibuya, 999 F.2d 517, 519 n.2, 27 USPQ2d 1418, 1420 n.2 (Fed. Cir. 1993) ("The term 'burden of proof' as

¹⁸ The examiner initially rejected the claims originally in the Cataldi application, which matured to the involved Cataldi patent, over the Parker patent and the party Cataldi et al. obtained the allowance of its claims over this patent. TR 574 and 575. The Parker patent was also cited, but no rejection was made, in both the Burroughs et al. reissue application and the Burroughs et al. patent.

used herein, and as we understand it to be used in § 1.633, means the burden to establish the proposition at issue by a preponderance of the evidence.") The basis for the proposed unpatentability is set forth in Addendum B to the brief.

The Sterling patent teaches at page 1, lines 19 to 30, a simple device for readily giving the user of a dry cell an approximate indication of the electrical condition of the cell at any time, comprising a cell having ("attached to or, or sent along with [line 25]") an indicating means so that the strength of the cell may be readily tested without the necessity of hunting up an instrument for the purpose. Sterling teaches two embodiments. The first embodiment is depicted in Figures 1 and 2 as follows:



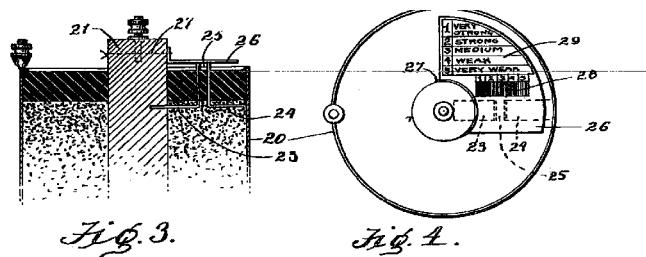
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As shown in Figures 1 and 2, the indicating means comprises a piece of paper or other carrier (5) having attached

thereto a pair of wires (6 and 7), the adjacent ends of which overlap and do not touch each other, leaving a space (8) between the wires, into which, an indicator, which will change color when an electric current is passed therethrough, is impregnated and dried. The preferred indicator is phenolphthalein. The wires (6 and 7) have clips (9 and 10) attached thereto for engagement with the binding posts (11 and 12) of the cell (13).

To test the strength of the battery, the user must attach both clips to the binding posts of the cell and moisten the indicator region where the phenolphthalein is present. Then, current will pass through the moistened spot and cause the indicator to change color. The battery condition is determined by comparing the color at the moistened section with the colors on color chart (15) printed on carrier (6).

The second embodiment is depicted in Figures 3 and 4 as follows:



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In this embodiment, a first piece of L-shaped sheet metal (23) is tightly fitted in a slot in the carbon electrode (21) such that its upper end protrudes through pitch seal (22) and is exposed at the outer surface of that pitch seal. A second L-shaped piece of sheet metal (24) is attached to the interior of the zinc can and extends out of the cell through the pitch seal (22) adjacent to, but out of contact with, the first piece (23). The exposed edges of the sheet metal pieces (23 and 24) define a space (25) analogous to the space (8) in the first embodiment. The carrier for the indicator is shown at 26 and is attached to the carbon electrode by a fastener (27). The carrier has a color chart (28) and an interpretative chart (29) printed on its surface. The part of the carrier that overlies space (25) is impregnated with an indicator such as phenolphthalein. To test the cell, the phenolphthalein impregnated spot (26) is moistened and pressed down onto the exposed edges of elements (23 and 24). The spot changes color in response to the magnitude of the battery voltage and a comparable color is selected from chart (28) and interpreted at chart (29).

Sterling fails as an anticipation of the claimed invention of the party Burroughs et al. in that Sterling does not disclose the particular indicating device or the particular

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switch means of the party Burroughs et al.'s claims. The secondary references, Kiernan and Parker '020, disclose indicating devices similar to those claimed by the party Burroughs et al.

The party Tucholski urges that it would have been obvious to one of ordinary skill in this art to substitute the thermochromic tester of Kiernan or Parker '020 for the electrochromic tester of Sterling, thus rendering the party Burroughs et al.'s claims obvious. In this regard, the party Tucholski relies upon the testimony of Dr. Liu, its expert witness, who testified at TR 154 to 158 that the suggestion for this substitution is found in the Sterling patent which shows the combination of a battery and a capacity determining voltage sensor. In addition, the party Tucholski relies upon the testimony of Dr. Barnett, the party Wang et al.'s expert, who testified at WR 882 to 883 that the motivation to combine Sterling and Kiernan is provided by Sterling's teaching that indicators other than phenolphthalein may be used.

Opinion re: Issue (1)

The party Tucholski has not sustained its burden to show that the party Burroughs et al.'s claims are obvious over Sterling in view of either Kiernan or Parker '020.

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Sterling contemplates the use of any chemical which can be impregnated into the space (8) and which will change color when a current is passed therethrough. Consequently, we agree with the party Burroughs et al. that there is no motivation or suggestion in Sterling to utilize any indicating device other than the chemical type disclosed therein. We also agree with the party Burroughs et al. that even if it were suggested to combine Sterling with Kiernan or Parker '020, which it is not, then the combined references would not disclose any switch means.

The experts (Messrs. Alan Palmer and Barnett testifying on behalf of the party Wang et al., and Mr. Chung-Chiun Liu testifying on behalf of the party Tucholski) testified that the Sterling patent does not disclose or suggest the use of a switch, i.e., clips 9 and 10 of Figures 1 and 2 do not act as a switch when attached to the battery posts 11 and 12 and the embodiment of Figures 3 and 4 is not a typical switch. WR 1468 to 1470, 1480 and 1481; TR 2179 to 2182, 2185, 2186, 2585 to 2586.

Assuming that it would have been obvious or somehow suggested to add a switch means to the combined references, we agree with the party Burroughs et al. that the switch means of independent claims 1, 24 and 44 and those dependent thereon, means for forming a switch as required by independent claims 16,

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20, 33, 37, 50 and 51 and those dependent thereon, electrical switch means as required by independent claims 24 and 44 and those dependent thereon must be those switches (membrane) described in the Burroughs et al. specification or equivalents thereof. See In re Donaldson, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994), where the Court stated with respect to 35 U.S.C. § 112, paragraph 6:

The plain and unambiguous meaning of paragraph six is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.

However, we do not agree with Burroughs et al. that claims 13 and 30 and those dependent thereon are necessarily limited to the use of membrane switches, because the claims do not recite electrical switch means but rather recite "electrical switch."

Further, as to all claims it should be noted that the Sterling, Kiernan and Parker patents were before the primary examiner in charge of the examination of the patents and reissue applications involved in this interference and the examiner found that the parties' claims designated as corresponding to the count of this interference are patentable over these patents. Nowhere

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does the party Tucholski explain why the examiner's actions in allowing the parties' claims over the references is in error. Clearly, such a showing should have been made. Cf. Brown v. Bravet, 25 USPQ2d 1147, 1150 (Bd. Pat. App. & Int 1992).

Accordingly, we hold that the party Tucholski has not sustained its burden to demonstrate a prima facie case for obviousness of the involved Burroughs et al. claims. Therefore, we need not evaluate the secondary considerations (long felt need and commercial success).

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Issues (5 and 6)

As we noted above (see Issue 1, Preliminary Matters, Section I), any issue of patentability of the parties' claims over prior art will only be considered insofar as it relates to the claims of the party Burroughs et al. Accordingly, the miscellaneous and preliminary motions are dismissed insofar as they urge that the claims of the parties Wang et al. and Cataldi et al. are unpatentable over prior art.

The miscellaneous motion (Paper No. 665) requests that the belatedness of the second preliminary motion for judgment be excused, since the preliminary motion could not have been filed earlier. It is urged that the evidence in support of the motion was not available until the cross-examination of Dr. David O. Feder was taken. During cross, Dr. Feder testified that if the BatCheck® device were on a piece of paper, then the BatCheck® would be "a label with an integral battery tester." The motion states that at that time, counsel for the party Tucholski evinced that the commercially available BatCheck® device (TX 1 and Tucholski's Cross Exhibit 47A (TCX 47A)) "meets all the limitations of the count" and recognized at that time that the BatCheck® device anticipated many of the claims corresponding to the count. The miscellaneous motion is denied.

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We agree with the party Burroughs et al.'s opposition that the party Tucholski had sufficient evidence available to it several months prior to the time of cross-examination which showed that the BatCheck® was a label with an integral battery tester. See the declarations submitted by the party Tucholski under 37 CFR § 1.672(b). Whether or not an admission was made by Dr. Feder is of no legal consequence against the party Burroughs et al., since Dr. Feder was a witness for the party Cataldi et al. An admission, if made, by Dr. Feder would be binding upon the party Cataldi et al. and not on the party Burroughs et al. See Fed. R. Evid. 801(d)(2).

Even if the motion were considered to have been timely filed, the motion would have been denied. As we noted above, the BatCheck® device is identical to the device disclosed in Parker '020. The motion urges that the BatCheck® device anticipates Burroughs et al.'s label claims 16, 18, 20, 22 to 24, 26, 28, 29, 33, 35 to 37, 39, 41, 42, 44, 46 and 48 to 50. Anticipation requires that all the elements of the claimed invention be described in a single reference. In re Spada, 911 F.2d at 708, 15 USPQ at 1657. Since the BatCheck® device, which is equivalent to the Parker '020, does not contain a switch, it cannot anticipate the foregoing claims. Nor would the BatCheck® in

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combination with Kiernan and Sterling render prima facie obvious the Burroughs et al. claims 1 to 11, 13 to 16, 28 to 20, 22 to 37, 39 to 57 because the combined references fail to disclose or suggest the use of any switch or the particular switch means utilized by the party Burroughs et al.

Unpatentability of the Party Burroughs et al.'s

Claims under 35 U.S.C. § 112--Issue (2)

The party Tucholski's brief urges that the senior party Burroughs et al.'s claims corresponding to the count are unpatentable under 35 U.S.C. § 112, first paragraph, for failure of the Burroughs et al. specification to contain a written description for the thermal insulation limitation of the claims.

Pages 97 and 98 of the opening brief break the claims into the following categories.

A. Claims 33, 35 to 37, 39, 40 and 43 to 49 recite

sufficient thermal insulation means under one of its surfaces to overcome heat sinking when the voltmeter is in contact with a battery having an electrically conducting housing

B. Claims 13 to 15 recite

a portion of a sealed chamber, cell or bubble below one of its [the conductive layer's] surfaces

C. Claims 16 to 23 recite

sufficient non-conducting means under one of its [the conductive layer's] surfaces to permit the heat

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generated by the conductive layer to change the color of the temperature sensitive color indicator material and indicate voltage when the voltage indicator is in contact with a battery housing

D. Claims 24 to 29 recite

means between the conductive layer and the battery housing to permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material when the voltage indicator is in contact with a battery housing

E. Claims 30 to 32, 41 and 42 recite

an air pocket under one of its [the conductive layer's] surfaces

F. Claim 50 recites

coupling means to permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material when the voltage indicator is in contact with a battery housing

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G. Claim 51 recites

means to transfer sufficient heat generated by the conductive layer to the temperature sensitive color indicator material...when the voltage indicator is in contact with a battery housing.

The party Tucholski's position

It is the party Tucholski's position that the Burroughs et al. specification as originally filed does not reasonably convey to the artisan that Burroughs et al. recognized the "heat sinking" problem which occurs when a voltage indicator is in contact with a battery having an electrically conducting housing, and that the specification does not have express support for, or inherently disclose, "thermal insulating means" or equivalents thereof. While the Burroughs et al. specification discloses the use of nonconductive materials, it is the party Tucholski's position that the specification meant that these materials are electrically nonconductive and not thermally nonconductive. The party Tucholski argues that there is no recognition in the Burroughs et al. specification of thermally nonconductive materials or that such materials would solve the heat sinking problem, and that the specification contains no examples of thermal insulators.

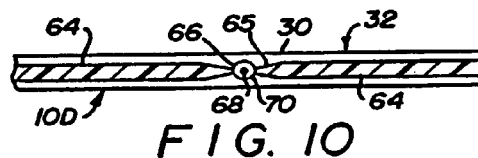
The Burroughs et al. specification

The Burroughs et al. specification, column 4, lines 21 to lines 38, discloses the following embodiment:

In another embodiment of the present invention, the battery-strength indicator means comprises:

- (a) a first nonconductive layer;
- (b) a second nonconductive layer attached to the first nonconductive layer, a portion of said first and second nonconductive layers forming a chamber therebetween;
- (c) a conductive layer sandwiched between said first and second nonconductive layers, the conductive layer reduced to a small cross-sectional area in the chamber; and
- (d) a heat sensitive color-indicating material in said sealed chamber that is adapted to undergo a color change when its temperature [sic] exceeds or crosses a predetermined value, said conductive layer in the chamber rising to a predetermined temperature [sic] when the voltage of the current flowing therethrough exceeds a predetermined value.

Figure 10 of the Burroughs et al. patent is as follows:



Concerning Figure 10, the Burroughs et al.

specification, column 8, line 26 to column 9, line 3, reads as follows:

Another embodiment of the battery-strength indicator device of the present invention is shown in FIG. 10. The indicator device 10D is a strip like device having first and second superimposed layers 30 and 32 which are attached together in the same manner as strips 30 and 32 in FIG. 3. At least one of the strips is transparent. Conductive layers 64 are sandwiched between the first and second layers. The conductive layer is reduced to a small cross-section 65 in the indicator zone 66. Within the indicator zone, the conductive layer is covered with a small amount of a pyrotechnic chemical 68 sensitive to heat. Surrounding the pyrotechnic chemical is a color indicating, heat-sensitive material 70 which will undergo a visible color change, either permanent or temporary, when the material is heated to at least a predetermined temperature. This battery-strength indicator device is a one-shot device; the pyrotechnic chemical will only decompose or react once. The pyrotechnic chemical undergoes rapid decomposition when it is heated to a predetermined temperature. The resistance of the conductive layer in the reduced cross-sectional area 5 is selected such that current flow at a minimum predetermined voltage through the conductive layer will raise the area to a predetermined temperature which will cause the pyrotechnic chemically to decompose or otherwise react. The pyrotechnic chemical in turn will raise the temperature of the color-indicating, heat sensitive material to the predetermined temperature for color change. [Emphasis added.]

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Although the indicator device of FIG. 10D
is shown with a color-indicating, heat-sensitive

material, the device can also be fabricated with the pyrotechnic chemical alone, thereby causing a slight charring to the strip which is noticeable. One of the strips can also be made of a material that is sensitive to temperature and will undergo a visible change when the temperature exceeds a predetermined value. Alternatively, the device can be fabricated without the pyrotechnic chemical, relying on the color-indicating, heat-sensitive material alone to indicate whether the battery has a predetermined minimal voltage output. If the color indicating, heat-sensitive material undergoes a non-permanent color change when exposed to a predetermined temperature, then the battery-strength indicator device of FIG. 10D can be used repeatedly to determine if the output voltage of the battery meets a predetermined voltage level. [Emphasis added.]

The Party Burroughs et al.'s Position

The party Burroughs et al. urges that its specification contains a sufficient written description for the limitation in question, "thermal insulating," and equivalents thereof and relies upon the testimony of Dr. Powers, an expert witness for the party Burroughs et al. Dr. Powers testified as follows at BR 32 to 39:

16. I have reviewed in particular the embodiment of the battery strength indicator shown in Fig. 10 of the Burroughs '544 patent and described in the specification in column 4, lines 21-38 and column 8, line 26 through column 9, line 3. As described therein, first and second nonconductive strips or

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layers 30 and 32 are applied to the side of the battery housing as in Fig. 2. Sandwiched between the

nonconductive layers is a conductive layer 64 which has a reduced cross sectional area 65 in a sealed chamber or indicator zone 66. In contact with the conductive layer is either a color indicating heat sensitive material 70, a pyrotechnic chemical 68, or the color indicating heat sensitive material in combination with the pyrotechnic chemical. When this embodiment of the battery strength indicator is electrically connected across the terminals of the battery, current flows through the conductive layer 64. Because the conductive layer is reduced to a small cross section 65 in the indicator zone 66, the resistance of which is selected such that current flow at a minimum predetermined voltage will raise the area 65 to a predetermined temperature, the heat generated by the conductive layer raises the temperature of the color indicating heat sensitive material to a predetermined temperature for color change to indicate the voltage or strength of the battery.

17. The insulative or nonconductive layers described in the Burroughs '544 patent are present to shield components of the strength indicator which transmit heat and/or electricity, and are indicated as doing so. For example, in the indicator device 10D shown in Fig. 10, nonconductive layers 30 and 32 (attached to the side of the battery housing) surround the "color indicating, heat sensitive material 70 which undergoes a visible color change when the material is heated to at least a predetermined temperature" (column 8, lines 37-41). In order for this embodiment to be operable when applied to the side of a dry cell battery, the construction of the battery strength indicator, including the nonconductive layers, must be such to permit sufficient heat generated by the reduced cross section conductive area 65 to flow to the color indicator material to cause a color change. Heat generated by the reduced section conductive area 65 is within the sealed chamber or zone 66 adjacent to

nonconductive layers 30 and 32, and will naturally desire to flow in all directions from reduced cross sectional conductive area 65, unless somehow constrained. In this instance, the clear function of nonconductive layers 30 and 32 is with regard to heat flow to ensure that the heat generated by the reduced conductive layer 65 is able to raise the temperature of the color indicating, heat sensitive material 70. The only way this can be accomplished is if layers 30 and 32 are *thermally* nonconductive. It would be illogical for anyone of ordinary skill in this art to understand that "nonconductive" layers 30 and 32 are somehow thermally conductive, since this would cause heat to flow away from color indicating, heat sensitive material 70 and would not permit material 70 to receive heat to undergo a visible color change to indicate the remaining strength of the battery, as is described. Likewise, in order for the current to be able to flow through conductive layer 64, "nonconductive" layers 30 and 32 must also be *electrically* nonconductive, or else the device would short circuit.

18. Additionally, the portion of the chamber, cell or bubble below the conductive layer and the air pocket (see Sections I.A. and I.F.) are inherently thermal insulative and independently provide adequate support to provide adequate support for the thermal insulation limitation. As such, it is the natural result of such construction that the nonconductive layer (30 or 32) adjacent to the battery housing, along with any portion of the sealed chamber or zone 66 beneath the conductive area 65, has both sufficient electrical insulation to prevent short circuiting and sufficient thermal insulation to overcome heat sinking when the battery strength indicator is in contact with the battery housing. The reference to repeated use of this embodiment of the battery strength indicator at column 9, lined 1-3 also requires that heat sinking to the battery

housing be overcome by the thermal insulation beneath the conductive area 65 of layer 64.

19. In connection with the battery housing, dry cell batteries of the type shown in Fig. 2 of Burroughs et al. patent and described elsewhere as nonrechargeable alkaline batteries (column 11, line 42) or zinc-carbon batteries (column 12, line 63) all have electrically conductive housings. In a case of alkaline dry cells, the side of the housing is part of the cathode. In the case of zinc-carbon batteries, the side of the housing is part of the anode. Thus, I believe that the Burroughs '544 patent inherently discloses that the dry cell battery housing is electrically conductive.

20. Fig. P-1 below is a side elevational view of a thermal and electrical model of the heat sensitive battery strength indicator embodiment shown

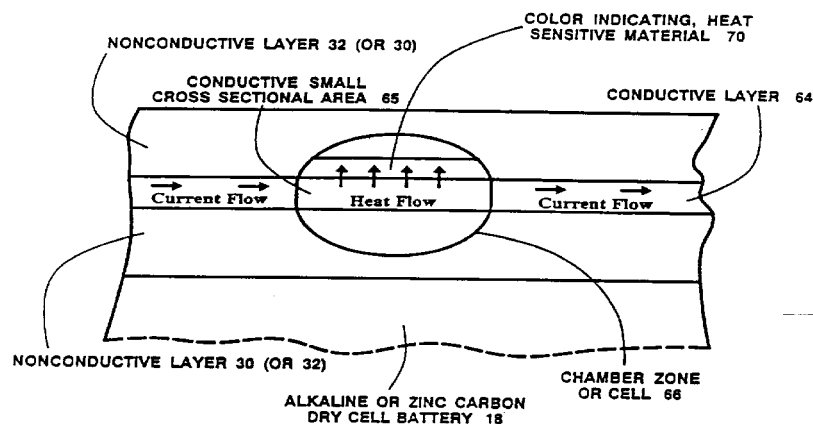


FIG P-1

(Reference numerals and feature designations
verbatim from Burroughs' '544 patent)

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in Fig. 10 of the '544 patent. While Fig. P-1 does not appear in the '544 patent as such, it is based entirely on the disclosure of the Burroughs '544 patent, and is intended to show the relative positions of the various components and the actual flow of heat and current as described in the patent.

The relative positions of the features of Fig. P-1 are supported by the '544 patent specification as follows, with the feature numbers shown bold in brackets corresponding to those shown in Fig. 10. Specifically, at column 4, lines 21-38, the specification states:

the battery strength indicator means comprises: (a) a first nonconductive layer [30]; (b) a second nonconductive layer [32] attached to the first nonconductive layer, a portion of the first and second nonconductive layers forming a chamber [66] therebetween; (c) a conductive layer [64] sandwiched between said first and second nonconductive layers, the conductive layer reduced to a small cross-sectional area [65] in the chamber; and (d) a heat sensitive color indicating material [70] in said sealed chamber that is adapted to undergo a color change when its temperature exceeds or crosses a predetermined value, said conductive layer in the chamber rising to a predetermined temperature when the voltage of the current flowing therethrough exceeds a predetermined value.

The battery strength indicator is attached to the side of a dry cell battery [18] in accordance with Fig. 2 and the disclosure at column 6, lines 15-29. The housings of both the nonrechargeable alkaline and zinc-carbon dry cell batteries disclosed in the '544 patent at column 11, line 42

and column 12, line 63 are electrically conductive. The heat sensitive color indicating material [70] is above the conductive layer reduced area in the sealed chamber in accordance with the top plan view shown in Fig. 10. Pyrotechnic chemical 68 is not shown in accordance with the alternate embodiment disclosed at column 8, lines 62-66. The current and heat flow as shown in Fig. P-1 above are disclosed at column 8, lines 45-54 and 62-66.

21. In my opinion, the current and heat flow model shown in Fig. P-1 is the necessary and only reasonable construction which one of ordinary skill in the battery art would give to this embodiment of the strength or voltage indicator disclosed in the Burroughs '544 patent. As I believe would be recognized by one of ordinary skill in the battery art, nonconductive layers 30 and 32 would be inherently recognized as having both sufficient thermal nonconductivity and sufficient electrical nonconductivity to permit the heat and current flow to make the device operable, since the absence of either would make the device inoperable. Further, in my opinion, the natural result flowing from this embodiment of the strength or voltage indicator disclosed in the Burroughs '544 patent, which one of ordinary skill in the battery art would recognize, is that the conductive layer has sufficient thermal insulating means under its surface to overcome heat sinking when the device is in contact with an electrically conductive portion of the battery housing.

22. Consistent with the above, nowhere in the Burroughs '544 patent is the term "nonconductive layer" specifically limited to *electrically* nonconductive materials, nor is it disclosed as being thermally *conductive*. It is my opinion that a person of ordinary

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skill in the art pertaining to battery design and
construction, when reading the Burroughs '544 patent,

would understand that, at least in connection with the embodiment of the battery strength indicator depicted in Fig. 10, the term "nonconductive layer" refers to both thermally and electrically nonconductive. This would be inherently understood because of the fact that both controlled heat flow and controlled current flow are discussed. For the strength indicator to operate as described, one would require thermal insulation in order for the heat from the reduced section area 65 to flow to the heat sensitive material 70, as well as electrical insulation in order to prevent the current flowing through conductive layer 64 and reduced section 65 to short circuit against the battery housing.

23. In some specific instances described in the Burroughs '544 patent, the nonconductive layers are described with regard to their electrically nonconductive function. For example, in the indicator device 10F shown in Fig. 15, nonconductive layer 30 is described as having a "high dielectric constant" so as to be able to control the electric field generated across cell 12 by electrodes 62a and 62b. In my opinion, this does not contradict the inherent and explicit disclosure of the capabilities of the nonconductive layers 30 and 32 in controlling heat flow in connection with the Fig. 10 embodiment, but merely makes reference to their concurrent dielectric properties in the Fig. 15 embodiment.

24. My opinion is supported by the various dictionaries that I have consulted, including the *Dictionary of Physics*, which define the term "conductor" or "conductive" as including both thermal conductivity and electrical conductivity. As such, the opposite term "nonconductive" would necessarily encompass both thermal insulation and electrical insulation properties, unless specifically limited to one or the other. My opinion of the nature and understanding of the term "nonconductive" in connection with layers 30 and 32 is supported by my experience

that the vast majority of nonconductive materials display both thermal and electrical insulating properties. It is my opinion that a person having ordinary skill in the art relating to battery design and construction would necessarily select a nonconductive material which would have both thermal insulating and electrical insulating properties, without undue experimentation. I am aware of one exception, diamond, which is a good electrical nonconductor while also being a good thermal conductor. I believe that it would be illogical, if not absurd, that anyone of ordinary skill in the art reading the '544 patent would somehow understand that the nonconductive layers, attached to a disposable battery, would be constructed of diamond, so as to be thermally conductive and electrically insulative.

The party Burroughs et al. also relies upon the following testimony of Dr. Powers with respect to attaching a heat sensitive or voltage indicator to a battery. Dr. Powers testified at BR 63 to 64 as follows:

75. To determine whether one of ordinary skill in the art could make and use a heat sensitive strength or voltage indicator based on the disclosure of the Burroughs '544 patent, I attached a commercially available heat sensitive strip type tester of the type disclosed in the aforementioned Parker, U.S. Patent No. 4,737,020 and Kiernan et al., U.S. Patent No., 723,656 to the types of batteries described in the '544 patent (column 12, lines 18-22). Specifically, I obtained a D size Eveready zinc-carbon dry cell battery having the conventional label on the side over the electrically conductive metal housing and affixed to it a Battery Checker

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X-2001 strip tester made by Toshiba Battery Co.,
shown as Exhibit C. The Toshiba strip tester has a

conductive layer with a reduced cross-sectional area to generate heat and, over it, a heat sensitive, color indicating material which changes color when it reaches a predetermined temperature due to heat flow from the conductive layer reduced cross-sectional area. Below the conductive layer there appears to be a thin nonconductive layer of ink or paint of less than 0.5 mil thickness. The strip tester was attached to the side of the Eveready battery by tape applied at the edges, with no gap apparent between the side of the battery and the strip tester. I then electrically connected the ends of the strip tester across the terminals of the battery and observed that heat generated by the conductive layer reduced cross-sectional area caused the heat sensitive color indicating material to change color to indicate the strength of the battery. The device was operable as attached to the side of the battery without any special precautions taken to provide thermal insulation or otherwise prevent heat sinking to the battery housing.

76. I repeated the experiment by substituting Energizer alkaline and Duracell alkaline dry cells for the Eveready battery as described above. I received similar results, indicating operability of the device without any special precautions taken to provide thermal insulation or otherwise prevent heat sinking to the battery housing.

77. Accordingly, I believe that one of ordinary skill in the battery art would be able to make and use the invention described by the Burroughs reissue claims. I further believe that the invention is adequately disclosed and supported in the Burroughs '544 patent and conveys with reasonable clarity to one skilled in this art that Burroughs et al. were in possession of the heat sensitive indicator embodiment described therein.

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In addition, the party Burroughs et al. relies upon the following testimony by witnesses associated with the opposing parties.

Dr. Alan Salkind, one of Cataldi's witnesses called by the party Wang et al., testified that he presumed that the nonconductive layer is both thermally nonconductive as well as electrically nonconductive. BR 2903. Dr. Feder, an expert testifying on behalf of the party Cataldi et al., testified with respect to Burroughs et al. Exhibit 5 (BX 5), which is directly analogous to the thermal battery strength indicator described in the Burroughs et al. patent, that nonconductive would normally mean either electrically or thermally nonconductive. BR 3938 to 3939.

Mr. Patrick D. Hein, a witness for the party Cataldi et al., testified on the operativeness of the Burroughs et al. specification. Mr. Hein testified that he tested materials and found that group III materials (ten thin synthetic polymeric films having thicknesses ranging from 0.001 to 0.005

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inches) had severe heat sinking problems. CR 1077, 1078, 1080 and 1081.

With respect to the heat sinking problem in the context of this interference, Mr. Hein testified at CR 1143 that heatsinking creates difficulties, i.e., it decreases the observed temperature profile on the battery tester/voltmeter when it is in proximity to a battery container, thus displaying inaccurate or incorrect readings when the tester mechanism is activated.

Mr. Hein explained at CR 1194:

In the case of a fresh cell with the temperature profiles that we exhibited, for an example, it [the fresh cell] might show that it had only three quarters of available power, when, in effect, it was the fresh cell that had 100 percent available power.

However, Mr. Hein acknowledged at CR 1195 that one could get an accurate good/bad type reading if the tester mechanism was properly designed. He also testified at CR 1195 and 1196:

Q. Now, within the context of the type of tester that was applied in the batteries in your declaration where there is a scale, could one compensate by condensing the scale of the sensor to compensate for some heatsinking effects?

A. I don't understand what you mean by compensating the scale or condensing the scale. Can you clarify that?

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Q. If one were to reduce the scale of the sensor so that it was measuring less of a difference from the lowest level to the highest level, could such

a reduced scale of sensor compensate for the heatsinking effects that you talk about with regard to the second group of materials?

A. If I understand the intent of your question, you're looking at condensing the scale to make it more like a -- just an on/off, good/bad, one or the other?

Q. It's going in that direction, yes.

A. The device could be designed that way if you so desired it to work that way. I don't think that there's a practical use if the scale would be condensed, but that's my opinion.

Q. What are other variables that would affect the reading on the thermal indicator that your [sic] tested? For example, would the electrical resistance of the heating element have an effect?

A. The electrical resistance of the heating element, the design of the taper of the element itself creating the -- controlling the current flow through the resistive -- or the conductive element of the tester, that will have an effect.

The color changing point of the thermochromic material will have an effect on the overall design of the tester mechanism. Those are the two biggest factors in regards to the tester mechanism itself.

Q. Will the thickness of the insulation also have an effect?

A. Yes.

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Opinion re: Issue (2)

Preliminarily, we agree with the party Burroughs et al. that the party Tucholski's opening brief improperly raises the matters of lack of written description with respect to the category B and E to G claims. These matters are not raised in the party Tucholski's underlying preliminary motion (Paper No. 82) for judgment. As we noted above, pursuant to 37 CFR § 1.655(b), a party cannot present at final hearing a matter which is not raised in a motion unless the party shows good cause as to why the matter was not properly raised by a timely filed preliminary motion. Bayles v. Elbe, 16 USPQ at 1391; Payet v. Swidler, 207 USPQ at 170; and Fredkin v. Irasek, 397 F.2d at 346, 158 USPQ at 284. No such showing was made by the party. Accordingly, the Tucholski brief is dismissed insofar as it raises the matters of lack of written description with respect to the category B and E to G claims.

The Burroughs et al. specification does not describe in ipsis verbis the presence of thermal insulation as required by claims 16 to 29, 33, 35 to 37, 39, 40 and 43 to 49. This, however, is not necessary in order to comply with the description

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requirement of 35 U.S.C. § 112, first paragraph, In re Lukach, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971); all that is required is that the application reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. In re Edwards, 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978) and In re Driscoll, 562 F.2d 1245, 1248-49, 195 USPQ 434, 437 (CCPA 1977). Each question of compliance with § 112, first paragraph, must be decided on its own facts. In re Driscoll, 562 F.2d at 1250, 195 USPQ at 438 and Prutton v. Fuller, 230 F.2d 459, 109 USPQ 59 (CCPA 1956).

We agree with the party Burroughs et al. that the Burroughs et al. specification contains a sufficient written description within the meaning of 35 U.S.C. § 112, first paragraph, for the category A, C, and D claims¹⁹, which are directed to the presence of thermal insulation.

¹⁹ It is urged by the party Burroughs et al. that with respect to its category C and D claims the means recitation is broad and that it is not necessary to make any finding that thermal nonconductivity is required by these claims.

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As explained by the party Burroughs et al. on page 138 of its opposition brief (Paper No. 737) to the Tucholski brief,

The Burroughs '544 patent specifically discusses both current flow and heat flow in connection with the proper operation of the embodiment, Figure 10. Current flows through the conductive layer 64 which, at its reduced cross sectional area portion 65, generates heat which is then transferred to the temperature sensitive color indicating material 70. The proper flow of current and heat requires that it be channeled, that is, contained by some structure. Such structure is provided by nonconductive layers 30 and 32, which must inherently be electrically and thermally nonconductive. That nonconductive layers 30 and 32 have a dual function, to be both thermally and electrically nonconductive, is something that a person having ordinary skill in the art would recognize. Otherwise, the device would be inoperative.

We agree with the party Burroughs et al.'s position on page 140 of its opposition brief that:

The insulative or nonconductive layers described in the Burroughs' 544 patent are present to shield components of the strength indicator which transmit heat and/or electricity and are indicated as doing so. For example, in the indicator device 10D shown in Fig. 10, nonconductive layers 30 and 32 (attached to the side of the battery housing) surround the "color indicating, heat sensitive material 70 which undergoes a visible color change when the material is heated to at least a pre-determined temperature" (column 8, lines 37-41).

In order for this embodiment to be operable when applied to the side of the dry cell battery disclosed in the specification and drawings, the construction of the battery strength indicator, including the nonconductive layers, must be such to permit sufficient heat generated by the reduced section conductive area 65 to flow to the color indicator material to cause a color change. Heat generated by the reduced section conductive area 65 is within the sealed chamber or zone 66 adjacent to nonconductive layers 30 and 32, and will naturally desire to flow in all directions from reduced cross sectional conductive area 65, unless somehow constrained. In this instance, the clear function of nonconductive layers 30 and 32 is with regard to heat flow to ensure that the heat generated by the reduced conductive layer 65 is able to raise the temperature of the color indicating, heat sensitive material 70. The only way this can be accomplished is if layers 30 and 32 are thermally nonconductive. [Emphasis in the original.]

Note that Alan Salkind, one of the party Cataldi's witnesses called by the party Wang et al., testified that he presumed that the nonconductive layer is both thermally nonconductive as well as electrically nonconductive. BR 2903. Dr. Feder, an expert testifying on behalf of the party Cataldi et al., testified with respect to BX 5, which is directly analogous to the thermal battery strength indicator described in the Burroughs patent, that nonconductive would normally mean either electrically or thermally nonconductive BR 3938 to 3939.

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In our view, the battery strength indicator disclosed and claimed in the Burroughs et al. patent is presumed to be operative. In re Jacobs, 318 F.2d 743, 745-46, 137 USPQ 888, 889 (CCPA 1963) and Field v. Knowles, 183 F.2d 593, 600-601, 86 USPQ 373, 378-379 (CCPA 1950). Therefore, we agree with the party Burroughs et al. that since its patent discloses and claims the particular embodiment of the temperature sensitive voltage indicator over a nonconductive layer attached to the side of a battery, this embodiment must be presumed to be operative, i.e., at least the lower nonconductive layer must inherently have sufficient thermal insulating means under one of [the conductive layer's] surfaces to overcome heat sinking when the voltmeter is in contact with a battery having an electrically conducting housing. Furthermore, the Burroughs et al. specification is sufficient to show that the natural result flowing from the operation of the device of Figure 10 is to permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material. See Hansgirk v. Kemmer, 102 F.2d 212, 40 USPQ 665 (CCPA 1939) and In re Reynolds, 443 F.2d 384, 389, 170 USPQ 94, 98 (CCPA 1971). In In re

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Reynolds, 443 F.2d 384, 389, 170 USPQ 94, 98, the court resolved an issue of inherent disclosure in an analogous case ("means for preventing an abrupt change in the capacitance . . .") in favor of an applicant by the disclosure of the drawing and the knowledge that "a person skilled in the art would suspect that there was some reason for the relationships shown in the drawing and would not regard such disclosure as accidental or arbitrary." The Reynolds court also quoted with approval from Technicon Instruments Corp. v. Coleman Instruments, Inc., 255 F.Supp. 630, 150 USPQ 227 (N.D. Ill. 1966), aff'd 385 F.2d 391, 155 USPQ 369 (7th Cir. 1967):

By disclosing in a patent application a device that inherently performs a function, operates according to a theory, or has an advantage, a patent applicant necessarily discloses that function, theory or advantage even though he says nothing concerning it.

In In re Smythe, 480 F.2d 1376, 1384-85, 178 USPQ 279, 285-86 (CCPA 1973), the court stated that the forgoing principle applies to the description requirement under 35 U.S.C. § 112.

It is also urged by the party Tucholski that even if the nonconductive layer disclosed by Burroughs et al. specification is a polymer layer, it would not be sufficiently

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thermally nonconductive to obviate the problem of heat sinking. However, we note that Dr. Powers performed an experiment to determine the operability of a heat sensitive battery strength or voltage indicator on the side of a battery without special precautions taken to prevent heat sinking from the conductive layer to the conductive battery housing, using a strip tester as described in the Parker '020 patent and Kiernan Patent. BR 63 and 64. The experiment run by Dr. Powers on behalf of the party Burroughs et al. demonstrates that heat sinking is not a problem. As explained by the Court in Field v. Knowles, 183 F.2d at 600, 86 USPQ at 378-79,

The disclosure of an application placed in interference by the Patent Office is presumed to be an operative disclosure, . . . and will not be held to be inoperative unless it is established (by the junior party by a preponderance of the evidence, . . .) that it can not be made to operate for any practical or useful purpose, . . . by such changes and alterations, short of invention, which one skilled in the art would be capable of applying in constructing the device with the disclosure of the specification and the drawings of the application as his guide. [Citations omitted.]

For the foregoing reasons, we hold that the party Tucholski has failed to sustain its burden to show that the

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Burroughs et al. specification does not have an adequate written description for its claims 13 to 29, 33 to 40 and 43 to 51.

Abuse of Discretion--Issue (3)

Issue 3(i)

With respect to Issue 3(i), the party Tucholski urges that the APJ should have allowed each party to present its evidence (a) supporting all its preliminary motions, oppositions and replies and (b) relating to priority at one final hearing and that it is an abuse of discretion for the APJ to schedule two final hearings, citing Espenschied v. Sykes v. Wier, 1929 Dec. Comm'r Pats. 26 (1927) and Hewitt v. Weintraub v. Hewitt and Rogers, 1907 Dec. Comm'r Pats. 155 (1907). These decisions hold that in a multi-party interference, one final hearing should be set to hear issues of "right to make"²⁰ and priority of invention rather than bifurcating the interference to hear the right to

²⁰ Prior to the adoption of the new rules, 37 CFR § 1.601 et seq., if a party to the interference did not have the "right to make" its claim, i.e., if the party's involved application did not contain a written description under 35 U.S.C. § 112, first paragraph, for its claim corresponding to a count, the interference would be dissolved as to that count and the party would not be heard on the question of priority. See Fildes v. Williamson, 92 F.2d 914, 916, 35 USPQ 457, 459 (CCPA 1937).

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make question at one hearing and priority of invention at a later hearing.

Opinion re: Issue 3(i)

The party Tucholski's position is not well taken. While the Espenschied and Hewitt decisions are relevant to interference practice over a half century ago, the practice has changed substantially; more issues can be reviewed at final hearing. The statute, 35 U.S.C. § 135(a), authorizes the Board to consider issues of priority of inventions and patentability, whereas prior to the 1985 amendment of the statute, the Board only considered priority of inventions and matters ancillary thereto.

During the motions period in this interference, the parties filed 91 preliminary and miscellaneous motions and requests together with associated oppositions, replies and comments. The rules in effect at the time that the Espenschied and Hewitt decisions were rendered did not contemplate the filing of such a vast array of motions.

Pursuant to 37 CFR §§ 1.601 and 1.610(e), an APJ in charge of an interference is authorized to determine a proper

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course of conduct in the interference for any situation not specifically covered by this subpart (37 CFR § 1.601 et seq.) in order to secure the just, speedy, and inexpensive determination of the interference. The rules, 37 CFR § 1.601 et seq., are not designed for a multi-party interference. The bifurcation of this proceeding into two phases, the first final hearing to hear questions of patentability and the second final hearing to hear questions of priority of invention, will secure the just, speedy, and inexpensive determination of this interference. Contrary to the arguments of the party Tucholski, the APJ did not abuse his discretion by setting separate final hearings. See the footnote in the Commissioner's Notice of December 8, 1986, 1074 Off.

Gaz. 4, which reads as follows:

It should be recognized that the decision of the Board following the final hearing may not terminate the interference. For example, if the order to show cause resulted from an Examiner-in-Chief's [APJ's] grant of a motion for judgment, and the Board after final hearing reversed the Examiner-in-Chief's [APJ's] decision, the case might then proceed to the taking of priority testimony. The Board's decision would however be final with regard to the basis of the motion for judgment.

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Clearly, the Commissioner contemplated that a bifurcated proceeding, one to decide patentability and the other to decide priority of invention, might result.

For the foregoing reasons, we hold that the party Tucholski has not sustained its burden to show an abuse of discretion.

Issue 3(ii)

With respect to issue 3(ii), the party Tucholski urges that the APJ abused his discretion by not granting Tucholski's request for additional discovery. The party Tucholski requested additional discovery from the party Wang et al. concerning "at least two consumer surveys" by Duracell Inc.

On pages 7 and 8 of Interlocutory Order No. 9, dated October 29, 1996 (Paper No. 632), the APJ denied the party Tucholski's motion stating, in part, as follows:

The matter concerning which the party Tucholski seeks additional discovery came to the party Tucholski's attention at least by May 10, 1996 (the date preliminary statements were opened and the Wang affidavit showing under 37 CFR 1.608(b) became available to the party Tucholski). The motion at bar was not promptly filed after the availability of the affidavit showing but rather filed on September 11, 1996, approximately four months later. Clearly under

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these circumstances, the motion was not seasonably filed after the party Tucholski became, or should have become, aware of the alleged ground of unpatentability.

When the party Tucholski became aware of the potential 35 U.S.C. § 102(b) bar, it was incumbent upon the party to seasonably file a belated preliminary motion for judgment. Since no belated motion for judgment was filed, the party Tucholski is not entitled to raise the issue of a possible 35 U.S.C. § 102(b) bar at the first final hearing. In this regard, see the Commissioner's Notice of October 6, 1992, 1144 OG 8, November 3, 1992. See also Glaser v. Strickland, 217 USPQ 351, 354 (Bd.Pat.Int. 1981) where the party Glaser was denied additional discovery on an issue of inequitable conduct because the issue was not raised by motion.

For the foregoing reasons, the Tucholski request for a time for filing motions for additional discovery is denied and the Tucholski motion for additional discovery on the matter of an alleged 35 U.S.C. § 102(b) is dismissed as not having been seasonably filed.

Opinion re: Issue 3(ii)

An APJ's decision on a motion is presumed to have been correct and the party attacking that decision has the burden of showing an abuse of discretion. 37 CFR § 1.655(a). An abuse of discretion may be found when (1) the decision is clearly unreasonable, arbitrary or fanciful, (2) the decision is based on an erroneous conclusion of law, (3) the findings are clearly

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erroneous, or (4) the record contains no evidence upon which the APJ rationally could have based the decision. Cf. Abrutyn v. Giovanniello, 15 F.3d at 1050-51, 29 USPQ at 1617.

The party Tucholski has not met its burden to show an abuse of discretion. The APJ denied the motion for additional discovery for two reasons--the motion was not promptly filed after learning of the two consumer surveys and the party Tucholski failed to file a belated preliminary motion for judgment. The party Tucholski has not shown where these reasons are incorrect.

If a party does not raise an issue via a preliminary motion, the party is not entitled to be heard at final hearing on that issue. 37 CFR § 1.655(c); General Instrument Corp. Inc. v. Scientific-Atlanta Inc., 995 F.2d 209, 212, 27 USPQ2d 1145, 1146-47 (Fed. Cir. 1993). If a party has not filed a preliminary motion raising an issue, the party is not entitled to additional discovery on that issue. Glaser v. Strickland, 217 USPQ 351, 354 (Bd. Pat. Int. 1981). The fact that the party Tucholski may not have had all the facts to support a preliminary motion for judgment on the alleged issue of prior public use is not a

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sufficient excuse for failing to file the motion. Certainly, if the party Tucholski believed that additional evidence in the form of testimony was required to support its motion, the party could have availed itself of the provisions of § 1.639(c) to (g) and described the nature of any proposed testimony. If the party Tucholski needed evidence which is in possession of an opponent, the party Tucholski could have explained the evidence sought, what it will show, and why it is needed. However, the party Tucholski did not avail itself of these provisions.

The party Tucholski's reliance on Perkins v. Kwon, 886 F.2d 325, 328, 12 USPQ2d 1308, 1310 (Fed. Cir. 1989) is misplaced. In Perkins, 886 F.2d at 328, 12 USPQ2d at 1311, the Court agreed with the Board "that issues of patentability and priority that have been fully developed before the Board should be resolved by the Board." In this case, the issue of patentability has not been fully developed, much less properly raised by the party Tucholski. Thus, we are under no obligation to determine the issue.

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For the foregoing reasons, we hold that the party Tucholski has not sustained its burden to show an abuse of discretion.

Issue 3(iii)

With respect to issue 3(iii), the party Tucholski urges that the APJ abused his discretion by permitting the senior party Burroughs et al. to raise its "Category B" motions at the first final hearing. The party Tucholski contends that raising these motions resulted "in added expense, time and complication for the parties involved in this interference and for the Board."

In Interlocutory Order No. 8, Section VI, the APJ acknowledged the senior party Burroughs et al.'s request to have 17 motions reviewed at the first final hearing, ordered the senior party to categorize its motions, and stated that the senior party would be permitted to raise at the first final hearing its motions which relate to the right of the junior parties Tucholski and Cataldi et al. to remain in this interference and which do not rely upon the consideration of any affidavit evidence submitted by any party in its motion, opposition, or reply. These motions (two) were later identified

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as "Category A" motions. Of these two motions, the APJ only authorized the senior party Burroughs et al. to seek review at the first final hearing of its motion under 37 CFR §§ 1.635 and 1.662(b) and its supplement thereto against Cataldi et al. (Paper Nos. 425 and 553).

In response to the requirement, the senior party identified five categories of motions--A to E. The category B motions (three preliminary motions for judgment (Paper Nos. 91 to 93) and two miscellaneous motions (Paper Nos. 480 and 487) relate to the right of the junior parties Tucholski and Cataldi et al. to remain in this interference and rely upon the consideration of affidavit evidence. The senior party requested reconsideration of the APJ's decision to deny the senior party the right to rely upon the category B motions. Upon reconsideration, the APJ authorized the senior party to seek review of the category B motions, since they rely upon declarations, which were presented in the senior party's oppositions to the junior parties' motions. The only other evidence, not relied upon in the oppositions, are the declarations of Mr. Peterson which introduce certain press

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releases into the record. See Interlocutory Order No. 9, Section IV.

Opinion re: Issue 3(iii)

The junior party Tucholski's position on this matter is untenable. The APJ has not caused added expense and complication to this proceeding by permitting the senior party to seek review of its Category B motions. As the APJ noted, the senior party is already relying upon all of the declarations, except the aforesaid declarations of Mr. Peterson, to support the senior party's oppositions to the junior parties' motions. Under those circumstances, we find no abuse of discretion in the APJ's actions. Nor did the APJ's action unduly delay or complicate this proceeding.

Issue 3(iv)

With respect to item 3(iv), the motion is dismissed as moot inasmuch as the party Tucholski's reply has withdrawn this item.

Retention of the Party Tucholski--Issue (4)

The party Tucholski requests that it be retained as a party to this interference regardless of the outcome of the first

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final hearing in order to participate in the priority phase of the interference. The party Tucholski states that it has a vested interest in prevailing or, if that is impossible, in ensuring that none of the other parties receives a patent on the subject matter at issue. The party Tucholski contends that if it and the party Cataldi et al. are "prematurely eliminated" from the interference after the first final hearing and the party Wang et al. receives a patent without their ever having been afforded an opportunity to contest the party Wang et al.'s 102(g) priority, then the party Wang et al. will be in a position to require the parties Tucholski and Cataldi et al. to unfairly pay royalties and to sue them for infringement. The request is denied.

It is not unjust to eliminate a junior party from a multi-party interference where that party's claims are unpatentable to the party. See Qadri v. Chu, 18 USPQ2d 1254 (Bd. Pat. App. & Int. 1990), aff'd. w/o memo. In this case, the junior party Tucholski has lost the priority contest vis-à-vis the senior party Burroughs et al. and is not entitled to any of its claims corresponding to the count. Even if the junior party

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Wang et al. were to prove priority of invention vis-à-vis the party Burroughs et al., that would not change the fact that the party Tucholski lost the priority contest to the party Burroughs et al. Since the party Tucholski's claims are not patentable, the party Tucholski has no right to remain in this interference.

As the proceeding now stands, the issuance of judgment against the party Tucholski is deemed proper, inasmuch as we have held that the party Burroughs et al.'s claims 13 to 29, 33 to 40 and 43 to 51 are not unpatentable for the reasons alleged by the party Tucholski. Even if we held that the Burroughs et al. claims 13 to 29, 33 to 40 and 43 to 51 were unpatentable for the reasons alleged by the party Tucholski, the party Tucholski did not attack the patentability of the party Burroughs et al.'s original patent claim 1 to 11 corresponding to the count, and these claims would remain in the interference.

Motion to Compel--(Issue 7)

In the motion, the party Tucholski requests that we compel the party Burroughs et al. to produce Messrs. James R. Burroughs and Alan N. O'Kain for examination upon their joint declaration under Rule 132, which was filed ex parte in the

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Burroughs et al. involved reissue application. According to the motion, the declaration acknowledges that the examiner rejected claim language on the ground that the disclosure fails to teach thermal insulative means and that on the basis of this declaration and related argumentation, the party Burroughs et al. were deemed to be a proper participant in this interference. The motion also relies upon the APJ's Interlocutory Order No. 9 which authorizes a party to call an opposing party's declarant, who is not relied upon by the opposing party, as a hostile witness pursuant to 37 CFR § 1.671(g) and urges that the party Burroughs et al.'s failure to produce the declarants is sanctionable.

37 CFR § 1.671(g) requires that a motion "shall describe the general nature and the relevance of the testimony. . . . " Since the motion to compel does not describe the general nature and relevance of the requested testimony, the motion fails to comply with the rule. Since the APJ's interlocutory order cannot waive the requirements of the rule, we decline to issue any sanction against the party Burroughs et al. In any event, the party Tucholski was not unduly prejudiced since it had the opportunity to rely upon its own experts and those of

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the other opposing parties who testified on the question of the adequacy of the Burroughs et al. specification.

For the foregoing reasons, the motion is denied.

Unpatentability of the Party Tucholski's Claims (Issue 8)

The Burroughs et al. brief requests that we decide the Burroughs et al. preliminary motion for judgment under 37 CFR § 1.633(a) that the party Tucholski's claims corresponding to the count are unpatentable over Burroughs et al.'s involved patent. The motion is dismissed as moot inasmuch as we are issuing judgment against the party Tucholski for the failure of its preliminary statement to overcome the filing of the senior party Burroughs et al. As a result of the judgment, the party Tucholski is not entitled to its claims corresponding to the count. Consequently, it is not necessary for us to decide whether the claims are also unpatentable over prior art.

JUDGMENT

Judgment with respect to the subject matter of the count in issue is hereby entered against Gary R. Tucholski, the junior party. Accordingly, on the present record,

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the party Tucholski is not entitled to a patent containing claims
1 to 35 and 46 to 70.

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| _____ STANLEY M. URYNOWICZ, JR. |) | |
| Administrative Patent Judge |) | |
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| _____ RONALD H. SMITH |) | BOARD OF PATENT |
| Administrative Patent Judge |) | APPEALS AND |
| |) | INTERFERENCES |
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| |) | |
| _____ MICHAEL SOFOCLEOUS |) | |
| Administrative Patent Judge |) | |

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 802

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

CHI-CHUNG WANG, TERRY C. EISENSMITH, CHARLES E. KIERNAN
AND ROBERT L. MILANESE

Junior Party,²¹

v.

GARY R. TUCHOLSKI

Junior Party,²²

v.

RICHARD T. CATALDI, PATRICK D. HEIN, HENRY J. HEIRIGS
AND JOHN C. LEO (PATENT)

Junior Party,²³

²¹ Application 07/730,712, filed July 16, 1991. Assignors to Duracell International Inc.

²² Application 07/641,394, filed January 15, 1991. Assignors to Eveready Battery Co., Inc., St. Louis, MO.

²³ Application 07/504,504, filed April 4, 1990, now U.S. Patent No. 5,059,895, issued October 22, 1991. Assignors to Eastman Kodak Co.

Interference No. 103,036

RICHARD T. CATALDI, PATRICK D. HEIN, HENRY J. HEIRIGS
AND JOHN C. LEO (REISSUE)

Junior Party,²⁴

v.

JAMES R. BURROUGHS AND ALAN N. O'KAIN (PATENT)

Senior Party,²⁵

JAMES R. BURROUGHS AND ALAN N. O'KAIN (REISSUE)

Senior Party.²⁶

Interference No. 103,036

FINAL HEARING: MAY 29, 1997

Before URYNOWICZ, RONALD H. SMITH, and SOFOCLEOUS, Administrative
Patent Judges.

SOFOCLEOUS, Administrative Patent Judge.

²⁴ Reissue Application 07/942,973, filed September 10, 1992. Accorded Benefit of U.S. Applications 07/504,504, filed April 4, 1990, and 5,059,895, issued October 22, 1991. Assignors to Eastman Kodak Co.

²⁵ Application 07/308,210, filed February 8, 1989, now U.S. Patent No. 5,015,544, issued May 14, 1991. Assignors to Strategic Energy, Ltd.

²⁶ Reissue Application 07/963,915, filed October 20, 1992. Accorded Benefit of U.S. Application No. 07/308,210, filed February 8, 1989, now Patent No. 5,015,544, issued May 14, 1991. Assignors to Strategic Energy Ltd.

FINAL DECISION WITH RESPECT TO THE PARTY CATALDI ET AL.

The subject matter of this interference relates to a battery with a strength indicator. The count of this interference is as follows:

Count 1

A battery having a label with an integral voltmeter; wherein the voltmeter comprises:

- A) a dielectric layer;
- B) a conductive layer above or below the dielectric layer; and a temperature sensitive color indicator layer in thermal contact with the conductive layer, characterized in that 1) the conductive layer has i) sufficient heat generating capacity to affect a change in the temperature sensitive color indicator layer and ii) sufficient thermal insulating means under one of its surfaces to overcome heat sinking when the voltmeter is in contact with a battery having an electrically conducting housing and 2) the voltmeter includes means for forming an electrical switch with the electrically conductive battery housing.

The party Wang et al.'s claims 22 to 24 and 43 to 63, the party Tucholski's claims 1 to 35 and 46 to 70, the party Cataldi et al.'s patent claims 9 to 29, the party Cataldi et al.'s reissue claims 9 to 25 and 28 to 40, the party Burroughs et al.'s patent claims 1 to 11 and the party Burroughs et al.'s reissue claims 13 to 51 correspond to the count.

In Interlocutory Order No. 2, dated May 10, 1996 (Paper No. 494), the Administrative Patent Judge (APJ) listed and acknowledged the 91 preliminary and miscellaneous motions and

requests, the various oppositions, replies thereto and comments²⁷ to various oppositions and replies, filed by the parties. In addition, the APJ opened preliminary statements and ordered their service. At the same time, the APJ placed the junior parties Tucholski and Cataldi et al. under an order pursuant to 37 CFR § 1.640(d)(3)²⁸ to show cause why judgment should not be entered against them in view of the fact that the dates alleged in their preliminary statements did not overcome the filing date of the senior party Burroughs et al.

The junior parties Tucholski and Cataldi et al. filed responses to the show cause order. The purpose of this final

²⁷ In an order, dated December 12, 1994 (Paper No. 77), the APJ in charge of the interference at that time authorized the parties to file comments in support of or in opposition to a motion directed at another party.

²⁸ This section reads, in part, as follows:

§ 1.640 Motions, hearings and decision, redeclaration of interference, order to show cause.

* * * * *

(d) An administrative patent judge may issue an order to show cause why judgment should not be entered against a party when:

* * * * *

(3) The party is a junior party whose preliminary statement fails to overcome the effective filing date of another party.

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hearing²⁹ is to determine whether the junior parties Tucholski and Cataldi et al. have shown sufficient cause to avoid the entry of judgment against them. This decision addresses the issues raised by the party Cataldi et al.

In its response (Paper No. 502) to the show cause order, the party Cataldi et al. urges that a favorable decision on its preliminary motions for judgment against the party Burroughs et al. would vitiate the show cause order under 37 CFR § 1.640(d)(3). If the senior party Burroughs et al.'s claims are held to be unpatentable as urged in the aforesaid preliminary motions, then the senior party Burroughs et al. would be removed from the interference and the interference would then proceed as a three-party interference with the party Cataldi et al. as the senior party. In that circumstance, the party Cataldi et al. would be entitled to take priority testimony.

The party Cataldi et al. also requested final hearing to consider its preliminary motion nos. 1 to 4, 23, 24, 32 and 38. In Interlocutory Order No. 4, mailed July 19, 1996, the APJ granted the request to the extent that this case would be set down for final hearing to consider such matters as may be

²⁹ The accompanying final decisions address the issues raised by the party Tucholski and by the party Wang et al.

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pertinent under 37 CFR § 1.655, with the caveat, "[n]o other motions will be reviewed."

In addition, the party Cataldi et al. filed a motion (Paper No. 503) for a testimony period to introduce evidence in support of its preliminary motions and its oppositions to the other parties' preliminary motions. The APJ granted the motion to the extent that the party Cataldi was authorized to introduce into evidence only that evidence relied upon in its preliminary motion nos. 1 to 4, 23, 24, 32 and 38 (Paper Nos. 101 to 104, 123, 124, 296 and 362), in its replies (Paper Nos. 270 to 273, 292, 293, 355 and 392) and in its oppositions to any opponent's motion which would be reviewed. The APJ's order states, "[n]o other evidence may be introduced." See Section V of Interlocutory Order No. 4, dated July 19, 1996 (Paper No. 534) and page 17 of Interlocutory Order No. 9, dated October 29, 1996 (Paper No. 632).

The parties Wang et al., Tucholski, Cataldi et al. and Burroughs et al. took testimony, filed records and briefs, and appeared through counsel, at final hearing.

ISSUES

The junior party Cataldi et al.'s opening brief³⁰ raises the following issues:

1. Whether we should decide motion nos. 10, 11, 17, 22, 31, 33 to 37, and 39.
2. Whether the senior party Burroughs et al.'s patent claims 1 to 11 and reissue claims 13 to 32, 34 to 36 and 38 to 51 should be designated as not corresponding to the count, as urged in motion no. 1?
3. Whether the senior party Burroughs et al.'s patent claims 1 to 11 are invalid and reissue claims 13 to 51 are unpatentable under 35 U.S.C. § 112, second paragraph, as urged in motion no. 2?
4. Whether the senior party Burroughs et al.'s reissue claims 13 to 51 are unpatentable under 35 U.S.C. § 112, first paragraph, for lack of adequate written description and for being based on a non-enabling disclosure, as urged in motion no. 3?
5. Whether the senior party Burroughs et al.'s reissue claims 1 to 51 are unpatentable on the ground of double patenting, as urged in motion no. 23?

³⁰ On page 156 of its main brief, the party Cataldi et al. withdraws consideration of its motion no. 4 in favor of its motion no. 32.

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6. Whether the senior party Burroughs et al.'s reissue claims 13 to 51 are unpatentable for failure to comply with 35 U.S.C. § 251, as urged in motion no. 24?

7. Whether the party Cataldi et al.'s motion no. 32 to substitute proposed count 4 should be granted?

8. If the senior party Burroughs et al.'s motion to amend its reissue claim 40 is granted, whether the party Cataldi et al.'s motion no. 38 should be considered.

In Interlocutory Order No. 10, consideration of the party Cataldi et al.'s miscellaneous motion no. 46 (Paper No. 665) against the party Burroughs et al. was deferred to final hearing provided that the party Cataldi et al. file a paper within five days after final hearing requesting consideration of the matters. Review of this motion has not been sought.

The senior party Burroughs et al.'s opening brief raises the following issues with respect to the party Cataldi et al.:

9. Whether the party Cataldi et al.'s reissue claims are unpatentable over prior art.

10. Whether the party Cataldi et al.'s patent claims are unpatentable over prior art.

11. Whether judgment should be entered against the party Cataldi et al. under the provisions of 37 CFR § 1.662(b).

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MATTERS NOT ENTITLED TO REVIEW AT FINAL HEARING

Issue (1)

In its opening brief (Paper No. 712), the junior party Cataldi et al. requests that we decide, either before or at the first final hearing, its motion nos. 10, 11, 17, 22, 31, 33 to 37, and 39.

We decline to decide the aforesaid motions, since they are not identified in Cataldi's request (Paper No. 502, filed May 30, 1996) for final hearing. The request only seeks final hearing to review the following motions:

Preliminary motion nos. 1 to 4, 23, 24, 32
and 38 (Paper Nos. 101 to 104, 123, 124, 296
and 362).

Interlocutory Order No. 4, granting the party Cataldi et al.'s request for final hearing, states that this case would be set down for final hearing to consider such matters as may be pertinent under 37 CFR § 1.655 and that no other motions would be reviewed. To now consider motions other than those specifically identified in the party Cataldi et al.'s request for final hearing would be contrary to the order and prejudicial to the rights of the opposing parties. In accordance with 37 CFR § 1.655(b), the interlocutory order is presumed to have been correct, and the burden is upon the party, here the party Cataldi

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et al., attacking the order to show an abuse of discretion. No abuse of discretion has been shown.

Interlocutory Order No. 10, Section III, defers to final hearing consideration of seven miscellaneous motions and one request for reconsideration provided that each party filing a motion or request file a paper requesting review of the motion or request at final hearing. This order, however, does not authorize any party to seek review of any motions (preliminary or miscellaneous) which were acknowledged earlier by the APJ in any of his prior orders, but rather authorizes each party to seek review of the motions and the request for reconsideration specifically identified in the Section III of the order.

To the extent that both the party Cataldi et al.'s paper (Paper No. 790) filed in response to Interlocutory Order No. 10, Section III and the party Cataldi et al.'s opening brief include a request for review of motion nos. 10, 11, 17, 22, 31, 33 to 37, and 39, which were not identified in Interlocutory Order No. 10, Section III, the request is dismissed as being belatedly filed in the absence of a miscellaneous motion under 37 CFR §§ 1.635 and 1.645(b) to excuse the belatedness.

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Issue (2)

The party Cataldi et al.'s opening brief requests that we decide the party Cataldi et al.'s motion no. 1, which urges that the party Burroughs et al.'s patent claims 1 to 11 and reissue claims 13 to 32, 34 to 36 and 38 to 51 should be designated as not corresponding to the count. The motion is dismissed as being inconsistent with the position taken by the party Cataldi et al. earlier in this proceeding.

On December 30, 1992, this interference was declared between the Wang et al. application and the Cataldi et al. patent. Thereafter, the interference was redeclared on August 19, 1994, by adding the Tucholski application, the Cataldi et al. reissue application and the Burroughs et al. reissue application, the Burroughs et al. patent not being involved in the proceeding. After the redeclaration of the interference, counsel for the party Cataldi et al. initiated a telephone conference call with both Judge Ronald H. Smith, the APJ then in charge of the interference, and counsel for the party Burroughs et al. During the conference call, counsel for the party Cataldi et al. requested that the Burroughs et al. patent be added to this interference, because both the Cataldi et al. reissue

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application and patent were involved in this interference whereas the Burroughs et al. patent was not. As a result of the conference call, Judge Smith redeclared the interference (Paper No. 51, mailed September 14, 1994) by adding the Burroughs et al. patent.

To have the Burroughs et al. patent added to the interference, one or more of its claims had to be directed to the same patentable invention as all the parties' claims then corresponding to the count. At the time of the conference call, by requesting that the Burroughs et al. patent be added to this interference, counsel for Cataldi et al. was representing that the claims of the Burroughs et al. patent were directed to the same patentable invention as all the parties' claims then designated as corresponding to the count. Counsel for the party Burroughs et al. did not oppose the addition of the Burroughs et al. patent to this proceeding.

The party Cataldi et al.'s present position in its main brief is inconsistent with its position taken during the conference call. A party's change in position, such as here, is considered improper, especially where the party obtains a judicial benefit on its previous position. Cf. Bosies v.

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Benedict, 27 F.3d 539, 544, 30 USPQ2d 1862, 1866 (Fed. Cir. 1994). In this case, the benefit obtained by the party Cataldi et al. is (i) to have all the Burroughs et al. patent claims designated as corresponding to the count so that if the party Burroughs et al. loses the priority contest, the party Burroughs et al. would lose all of its patent claims designated as corresponding to the count and (ii) to have the opportunity to file another preliminary motion for judgment, i.e., motion no. 24, a motion which the party Cataldi et al. seeks review of at this hearing.

For the foregoing reasons, the party Cataldi et al.'s motion no. 1 is dismissed.

MATTERS ENTITLED TO REVIEW AT FINAL HEARING

Patentability of the Party Burroughs et al.'s

Claims (Issues 3 to 6 and 8)

Issues (3 and 8)

The party Cataldi et al.'s opening brief requests that (i) we decide the party Cataldi et al.'s motion nos. 2 and 38³¹ which urge that the party Burroughs et al.'s patent claims 1 to

³¹ In response to the motion no. 2, the party Burroughs et al. filed an amendment. Since we entered the amendment, we will consider motion no. 38 which concerns the patentability of reissue claim 40.

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11 are invalid and reissue claims 13 to 51 are unpatentable under 35 U.S.C. § 112, second paragraph.

In response to the motion no. 2, the party Burroughs et al. filed an opposition and an amendment³² canceling claims 17, 21, 34 and 38, amending claims 18 and 19 to depend from claim 16, amending claim 22 to depend from claim 20, amending claim 23 to depend from claim 16, amending claims 35 and 36 to depend from claim 33, amending claim 39 to depend from claim 37, and amending claims 40 and 43 to depend from claim 37. By canceling and amending the claims, the party Burroughs et al. is acquiescing to the grounds of unpatentability raised against these claims. Accordingly, to simplify the matters for consideration, the Burroughs et al. amendment is entered and the APJ is directed to redeclare this interference to reflect the amendment of the Burroughs et al. claims. Thus, we will consider the motion as it relates to patent claims 1 to 11 and reissue claims 13 to 16, 18 to 20, 22 to 33, 35 to 37 and 39 to 51.

As the moving party, the party Cataldi et al. has the burden of proof by a preponderance of the evidence on the motion.

³² This amendment was presented in the Burroughs et al. reissue application and is referred to in the party Burroughs et al.'s oppositions to motion nos. 2 and 3.

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Kubota v. Shibuya, 999 F.2d 517, 519 n.2, 27 USPQ2d 1418, 1420 n.2 (Fed. Cir. 1993) ("The term 'burden of proof' as used herein, and as we understand it to be used in § 1.633, means the burden to establish the proposition at issue by a preponderance of the evidence.") The burden upon the party Cataldi et al. is the same as that upon an examiner who rejects a claim under 35 U.S.C. § 112, second paragraph, i.e., to establish that one of ordinary skill in the pertinent art, when reading the claims in light of the supporting specification, would not have been able to ascertain with a reasonable degree of precision and particularity the particular area set out and circumscribed by the claims. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). In re Hammack, 427 F.2d 1378, 1382, 166 USPQ 204, 208 (CCPA 1970) (The purpose of 35 U.S.C. § 112, second paragraph is to provide those who would endeavor, in future enterprise, to approach the area circumscribed by the claims of a patent, with the adequate notice demanded by due process of law, so that they may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance).

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We have reviewed the Burroughs et al. claims in light of the arguments raised by the party Cataldi et al. We agree with the party Burroughs et al. that most of the objections are "nit-picking." For example, claim 1 recites "[a] battery having a battery strength indicating means . . . comprising a battery" The party Cataldi et al. urges that this claim is indefinite and makes no sense because it recites "that a battery comprises a battery." We agree with the party Burroughs et al. that one skilled in the art would be able to ascertain the metes and bounds of claim 1 with a reasonable degree of certainty. Other objections to most of the remaining claims are of a similar vein and we will not repeat them.

The party Cataldi et al. also urges that claims 35 and 36, which depend upon claim 33, and claim 40, which depends upon claim 37, are indefinite for lack of antecedent support. Claim 35 and 36 recite "the temperature insulating means" of claim 33, whereas claim 33 recites "a thermal insulating means." Claim 40 recites "the dielectric substrate" of claim 37, whereas claim 37 recites "a dielectric layer." In our view, the term, temperature insulating means, finds reasonable antecedent support in the previously recited thermal insulating means of claim 33. Like-

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wise, the term dielectric substrate of claim 40 finds reasonable antecedent basis in the previously recited dielectric layer of claim 37. In our view, the scope of these claims would be reasonably ascertainable by those skilled in the art. Cf. Ex parte Porter, 25 USPQ2d 1144, 1146 (Bd. Pat. App. & Int. 1992).

We agree with the party Cataldi et al. that the Burroughs et al. claim 31 is indefinite for lack of antecedent support. Claim 31 recites "the insulating means" of claim 30, whereas claim 30³³ recites "an air pocket." Since insulating means is a broader term than air pocket, the term, air pocket, would not provide proper antecedent support for the term, insulating means, of claim 31. We also agree with the party Cataldi et al. that claim 50 is indefinite because the term "coupling means" is not defined in the Burroughs et al. specification. The specification does not show any structure for the coupling means. We do not agree with the party Burroughs et

³³ Claim 30 contains an obvious misspelling of the word "affect," which can be corrected upon the resumption of ex parte prosecution.

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al. that the structure is shown where the pyrotechnic chemical is surrounded by the color indicating, heat sensitive material, or by the alternative embodiment where the device is fabricated without the pyrotechnic chemical so that the heat sensitive material contacts the conductive area. In our view, the coupling means is not equivalent to the heat sensitive material contacting the conductive area, because no other interaction other than contacting is specified.

For the foregoing reasons, the Cataldi et al. motion no. 2 is denied with respect to the Burroughs et al. patent claims 1 to 11 and reissue claims 13 to 16, 18 to 20, 22 to 30, 32, 33, 35 to 37, 39 to 49 and 51 and is granted with respect to the Burroughs et al. reissue claims 17, 21, 31, 34, 38, and 50. The entry of judgment as to these latter claims is deferred to the next final hearing, since we do not normally enter a piecemeal judgment with respect to a party.

Issue (4)

The party Cataldi et al.'s opening brief requests that we decide whether the party Burroughs et al.'s reissue claims 13 to 51 are unpatentable under 35 U.S.C. § 112, first paragraph, as

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urged in motion no. 3. Since we have entered the party Burroughs et al.'s amendment in our decision on Issue (3), supra, we will consider the motion as it relates to reissue claims 13 to 16, 18 to 20, 22 to 33, 35 to 37 and 39 to 51. As the moving party, the party Cataldi et al. has the burden of proof by a preponderance of the evidence on the motion. Kubota v. Shibuya, 999 F.2d 517, 519, n.2, 27 USPQ2d 1418, 1420, n.2. Preliminarily, in item (1), the party Cataldi et al.³⁴ urges that we give no weight to the direct testimony of Dr. Powers because the cross-examination indicates that his direct testimony is not credible,³⁵ and that the opinions in his direct testimony are legally incompetent.³⁶ The party Cataldi et al. urges that since Dr. Powers could not

³⁴ The party Cataldi et al. has also filed a miscellaneous motion no. 47 to strike, inter alia, certain testimony of Dr. Powers, because the testimony comprises incompetent legal opinions proffered by a lay witness. Since we will evaluate Dr. Powers' testimony as to facts and not as to legal opinions, the motion is dismissed as unnecessary. Insofar as the motion requests that testimony adduced by other witnesses be stricken, the motion is dismissed as moot since we do not rely upon that testimony.

³⁵ The party Cataldi et al. relies upon its proposed findings of fact Nos. (175) to (181) to support a lack of credibility.

³⁶ The party Cataldi et al. relies upon its proposed findings of fact Nos. (182) to (196) to support its assertion of legal incompetence.

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understand the figures in the Kiernan et al. patent³⁷ and could not interpret Figure 10³⁸ of the party Burroughs et al.'s specification,³⁹ Dr. Powers' testimony with respect to these matters should be given no weight. We decline to accord Dr. Powers' testimony no weight, but rather will evaluate his testimony insofar as it relates to the matters which we must decide.

The motion under consideration urges that the Burroughs et al. specification lacks written description for 14 limitations recited in its claims. For ease of reference, we have retained the same numbering, i.e., items 2 to 15, as in the party Cataldi et al.'s main brief.

³⁷ The party Cataldi et al. relies upon its proposed findings of fact Nos. (197) to (205) to support its conclusion that Dr. Powers did not understand the Kiernan patent.

³⁸ The Burroughs et al. patent specification, column 5, lines 50 to 52, states that Figure 10 is "a top plan view." Other figures, i.e. 1, 1A, 4, and 11, are also identified as top views or top plan views. A review of these figures shows that they are not standard top views, but rather are a hybrid between a top view and a side view. Since we are able to ascertain what these figures depict, we have no doubt that one skilled in the art would also be able to ascertain what they depict.

³⁹ The party Cataldi et al. relies upon its proposed findings of fact Nos. (206) to (214) to support its contention concerning Figure 10.

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The written description requirement of 35 U.S.C. § 112, first paragraph, requires that an application convey with reasonable clarity to those skilled in the art that, as of its filing date, applicant was in possession of the invention. Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). To comply with the description requirement, it is not necessary that the application describe the claimed invention in ipsis verbis, In re Lukach, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971); all that is required is that the application reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. In re Driscoll, 562 F.2d 1245, 1250, 195 USPQ 434, 438 (CCPA 1977).

In item 2, the motion urges that the Burroughs et al. specification does not contain a written description for "a sealed chamber, cell or bubble" limitation of reissue claims 13 to 15, 19, 23, and 27. The motion relies upon the testimony of Dr. Feder at pages 44 to 55 of the party Cataldi et al.'s record (CR 44 to 55). Dr. Feder testified that the Burroughs et al. specification does not disclose this limitation as being a part of the structure of the voltage indicator but rather discloses

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this limitation as being a part of the switch. The motion is denied with respect to item 2.

We agree with the party Burroughs et al. that the specification, column 4, lines 21 to 38, teaches a battery strength indicator comprising attached first and second nonconductive layers with "a portion of said first and second nonconductive layers forming a chamber therebetween," and "a conductive layer sandwiched between said first and second nonconductive layers, the conductive layer reduced to a small cross-sectional area in the chamber." Obviously, if the chamber is sandwiched by the surfaces of the first and second nonconductive layers, the chamber is below one of the surfaces. Further, the specification, column 6, lines 5 to 7, states that the indicator device has an indicator chamber, cell or bubble. This disclosure, in our view, contains a sufficient written description for the limitation as being a part of the voltage indicator device.

In item 3, the motion urges that the Burroughs et al. specification does not contain a written description for the "switch" limitation of reissue claims 16 to 29, 33 to 40 and 44 to 51. Since claims 17, 21, 34 and 38 were cancelled, this item

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will be considered as to claims 16, 18 to 20, 22 to 29, 33, 35 to 37, 39, 40 and 44 to 51. Independent claims 16, 20, 24, 50, and 51 recite that the voltage indicator means or voltage indicator includes means for forming an electrical switch with an electrically conductive portion of the battery housing. Independent claims 33 and 37 recite that the voltmeter includes means for forming an electrical switch with the electrically conductive battery housing. Independent claim 44 recites an electrical switch means positioned "to couple electrically the conductive layer and the battery can." The motion relies upon the testimony of Dr. Feder who testified that the electrical switch is not connected to an electrically conductive part of the battery housing, but rather is connected to either the anode or the cathode of the battery, the anode and cathode not being a part of the battery housing. CR 405. The motion is denied as to item 3.

We agree with the party Burroughs et al. that its specification, column 5, lines 20 to 22, teaches that "the improved batteries can have switch means to electrically connect the battery strength indicator to the battery." Figure 2 and the accompanying description in the specification show and describe a battery having a housing to which is attached the strength or

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voltage indicator device. We agree with the party Burroughs et al. that the terms, "battery housing" and "battery can," necessarily mean that the housing or the can includes both an anode and a cathode. In this regard, Dr. Powers testified that the battery of Figure 2 of the Burroughs et al. patent has an anode 20 and a cathode as part of the battery housing. Burroughs Record, page 28 (BR 28). The electrical switch in Figure 2 is attached to the anode or cathode. As is well known to the skilled person in the art, both the anode and cathode portions of the battery housing are electrically conducting. This disclosure, in our view, contains a sufficient written description for the limitation in question.

In making our finding, we have weighed Dr. Feder's testimony at CR 405 that the anode and cathode of a battery are not a part of the battery housing against the testimony of Dr. Powers that the anode and cathode of a battery are a part of the battery housing. We find that Dr. Power's testimony is more credible than Dr. Feder's testimony. Dr. Feder's testimony at CR 405 is inconsistent with Figure 3 of the party Cataldi et al.'s involved patent which depicts the battery housing 4 as including both the anode and cathode and with his testimony at

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BR 3649 that in the case of an alkaline battery, the cylindrical can, including the closed end, and the closure for the other end of the battery, comprises the battery housing. Thus, according to Dr. Feder, the ends of an alkaline battery, which include the anode and cathode, are a part of the battery housing.

For the foregoing reasons, the motion is denied as to item 3.

In item 4, the motion urges that the Burroughs et al. specification does not contain a written description for the "substrate" limitation of reissue claims 17 to 19, 21 to 23, 34 to 36 and 38 to 40. Since the party Burroughs et al. canceled and/or amended these claims, the motion is dismissed as moot with respect to this item.

In item 5, the motion urges that the Burroughs et al. specification does not contain a written description for the limitation, "sufficient means under one of its [the conductive layer's] surfaces to permit the heat generated" by the conductive layer to change the color of the temperature sensitive color indicator, of reissue claims 16 to 23. Since claims 17 and 21 were canceled, this item will be considered as to claims 16, 18

to 20, 22 and 23. The motion relies upon the testimony of Dr. Feder.

The Burroughs et al. specification

The Burroughs et al. specification, column 4, lines 21 to lines 38, discloses the following embodiment:

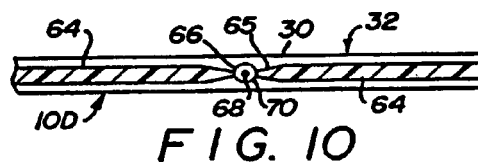
In another embodiment of the present invention, the battery-strength indicator means comprises:

(a) a first nonconductive layer;
(b) a second nonconductive layer attached to the first nonconductive layer, a portion of said first and second nonconductive layers forming a chamber therebetween;

(c) a conductive layer sandwiched between said first and second nonconductive layers, the conductive layer reduced to a small cross-sectional area in the chamber; and

(d) a heat sensitive color-indicating material in said sealed chamber that is adapted to undergo a color change when its temperature [sic] exceeds or crosses a predetermined value, said conductive layer in the chamber rising to a predetermined temperature [sic] when the voltage of the current flowing therethrough exceeds a predetermined value.

Figure 10 of the Burroughs et al. patent is as follows:



Concerning Figure 10, the Burroughs et al. specification, column 8, line 26 to column 9, line 3, reads as follows:

Another embodiment of the battery-strength indicator device of the present invention is shown in FIG. 10. The indicator device 10D is a strip like device having first and second superimposed layers 30 and 32 which are attached together in the same manner as strips 30 and 32 in FIG. 3. At least one of the strips is transparent. Conductive layers 64 are sandwiched between the first and second layers. The conductive layer is reduced to a small cross-section 65 in the indicator zone 66. Within the indicator zone, the conductive layer is covered with a small amount of a pyrotechnic chemical 68 sensitive to heat. Surrounding the pyrotechnic chemical is a color indicating, heat-sensitive material 70 which will undergo a visible color change, either permanent or temporary, when the material is heated to at least a predetermined temperature. This battery-strength indicator device is a one-shot device; the pyrotechnic chemical will only decompose or react once. The pyrotechnic chemical undergoes rapid decomposition when it is heated to a predetermined temperature. The resistance of the conductive layer in the reduced cross-sectional area 5 is selected such that current flow at a minimum predetermined voltage through the conductive layer will raise the area to a predetermined temperature which will cause the pyrotechnic chemically to decompose or otherwise react. The pyrotechnic chemical in turn will raise the temperature of the color-indicating, heat sensitive material to the predetermined temperature for color change. [Emphasis added.]

Although the indicator device of FIG. 10D is shown with a color-indicating, heat-sensitive material, the device can also be fabricated with the pyrotechnic chemical alone, thereby causing a slight charring to the strip which is noticeable. One of the strips can also be made of a material that is sensitive to temperature and will undergo a

visible change when the temperature exceeds a predetermined value. Alternatively, the device can be fabricated without the pyrotechnic chemical, relying on the color-indicating, heat-sensitive material alone to indicate whether the battery has a predetermined minimal voltage output. If the color indicating, heat-sensitive material undergoes a non-permanent color change when exposed to a predetermined temperature, then the battery-strength indicator device of FIG. 10D can be used repeatedly to determine if the output voltage of the battery meets a predetermined voltage level. [Emphasis added.]

The Party Cataldi et al.'s Position

The party Cataldi et al. relies upon Dr. Feder's testimony in order to show that the foregoing specification does not contain a written description for the limitation, "sufficient means under one of its [the conductive layer's] surfaces to permit the heat generated" by the conductive layer to change the color of the temperature sensitive color indicator, of reissue claims 16 to 23.

Dr. Feder testified (1) that these claims are directed to the indicator device 10D shown in Burroughs et al.'s Figure 10 [CR 60], (2) that the device does not disclose sufficient means under one of the conductive layer's surfaces to permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator and to indicate voltage [CR 60], (3) that the specification is completely silent regarding the effects of thermal conduction of heat from the indicator

device to the battery housing [CR 60], (4) that the specification teaches that the "electrically insulating layers that surround the conductive layer are very thin," [CR 60], (5) that the specification at column 7, lines 19 to 21, teaches a thickness such as one or two mils [CR 61], and (6) that the disclosed thickness of one or two mils suggests that the electrically insulating layers for the other disclosed indicator devices have a similar thickness [CR 61].

Dr. Feder also testified at CR 61 as follows:

(90) It is clear from the party Burroughs et al.'s original disclosure that the nonconducting base layer under the conductive leads 14 is electrically nonconducting. This is so because the original disclosure is silent regarding thermal isolation, because the thickness range of one to two mils is known to be suitable for electrical insulation, and because it is well known that electrical insulation is necessary to prevent electrical short circuiting. [Emphasis in the original.]

Referring to the second embodiment of Figure 10, which is described at column 8, line 62 to column 9, line 3 of the Burroughs specification, Dr. Feder testified . . .

[I]t is my opinion that this embodiment of the indicator device 10D would not be useful because it would not provide an accurate indication of the voltage state of the battery. That is so because the conductive layer 64 could not be made to generate sufficient heat to overcome the heat sinking provided by the battery housing in order to sufficiently increase the temperature of the heat-sensitive color indicator material. The

heat sinking problem arises due to the novel arrangement of the apparatus. Specifically, the planar heat sensitive indicator device is in mechanical contact with the battery housing over a wide area. The integral mechanical contact also provides a high rate of thermal conduction of heat from the indicator device to the battery. Since this structure with its attendant functional requirements is novel to this invention, the novel problem of heat sinking that is associated with it was also novel and clearly was not recognized by the party Burroughs et al. or by the draftsman of the party Burroughs et al.'s application. For these reasons, at least, the heat sinking problem and a solution to the heat sinking problem would not have been obvious to one of ordinary skill in the art in view of the party Burroughs et al.'s specification. Therefore, the party Burroughs et al.'s specification does not teach the concept of a thermal insulating layer between the conductive layer and the housing of the battery, as is recited by claims 16-23. [CR 61 to 62.]

Relying upon Dr. Feder's testimony at CR 61, paragraph (90), and the decisions of Ex parte Parks, 30 USPQ2d 1234 (Bd. Pat. App. & Int. 1994) and Schriber-Schroth Co. v. Cleveland Trust Co., 305 U.S. 47, 39 USPQ 242 (1938), the party Cataldi et al.'s main brief at page 97 urges that the Burroughs et al. specification by using a thermally-responsive indicator without a pyrotechnic material (the second embodiment) cries out for the mention of a thermal insulator, "given that plastic of only 1 or 2 mils thickness is not sufficient to act as a thermal insulator, even though it is of sufficient thickness to act as an electrical insulator." Further, the brief contends that since the Burroughs

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et al. specification makes no mention of thermal insulator, then none was intended.

Further, on page 98 of its opening brief,⁴⁰ the party Cataldi et al. urges that on cross-examination Dr. Powers admitted that both Kiernan et al., U. S. Patent No. 4,723,656 and Parker, U. S. Patent No. 4,737,020 disclose a layer that functions as an electrical insulator and as a thermal conductor. In addition, the party Cataldi et al. argues at page 98 of its brief that Dr. Powers admitted that the term, conductive, was used in the party Burroughs et al.'s specification only in the electrical sense,⁴¹ that Dr. Powers could not explain why he understood the word conductor to refer to electrical and thermal properties, and that Dr. Powers admitted that no specific materials were disclosed for layers 30 and 32.⁴²

⁴⁰ This section of the brief relies on proposed findings of fact (266) to (270).

⁴¹ The party Cataldi et al. relies on its proposed finding of fact no. (271). This proposed finding relies upon Dr. Powers' testimony at BR 511 to 516, wherein Dr. Powers testified that the terms, conductive means and conductive layer, meant electrically conductive.

⁴² The party Cataldi et al. relies on its proposed finding of fact no. (273).

The Party Burroughs et al.'s Position

The party Burroughs et al. relies upon the following testimony by Dr. Powers.

16. I have reviewed in particular the embodiment of the battery strength indicator shown in Fig. 10 of the Burroughs '544 patent and described in the specification in column 4, lines 21-38 and column 8, line 26 through column 9, line 3. As described therein, first and second nonconductive strips or layers 30 and 32 are applied to the side of the battery housing as in Fig. 2. Sandwiched between the nonconductive layers is a conductive layer 64 which has a reduced cross sectional area 65 in a sealed chamber or indicator zone 66. In contact with the conductive layer is either a color indicating heat sensitive material 70, a pyrotechnic chemical 68, or the color indicating heat sensitive material in combination with the pyrotechnic chemical. When this embodiment of the battery strength indicator is electrically connected across the terminals of the battery, current flows through the conductive layer 64. Because the conductive layer is reduced to a small cross section 65 in the indicator zone 66, the resistance of which is selected such that current flow at a minimum predetermined voltage will raise the area 65 to a predetermined temperature, the heat generated by the conductive layer raises the temperature of the color indicating heat sensitive material to a predetermined temperature for color change to indicate the voltage or strength of the battery.

17. The insulative or non-conductive layers described in the Burroughs '544 patent are present to shield components of the strength indicator which transmit heat and/or electricity, and are indicated as doing so. For example, in the indicator

device 10D shown in Fig. 10, nonconductive layers 30 and 32 (attached to the side of the battery housing) surround the "color indicating, heat sensitive material 70 which undergoes a visible color change when the material is heated to at least a pre-determined temperature" (column 8, lines 37-41). In order for this embodiment to be operable when applied to the side of a dry cell battery, the construction of the battery strength indicator, including the non-conductive layers, must be such to permit sufficient heat generated by the reduced cross section conductive area 65 to flow to the color indicator material to cause a color change. Heat generated by the reduced section conductive area 65 is within the sealed chamber or zone 66 adjacent to nonconductive layers 30 and 32, and will naturally desire to flow in all directions from reduced cross sectional conductive area 65, unless somehow constrained. In this instance, the clear function of nonconductive layers 30 and 32 is with regard to heat flow to ensure that the heat generated by the reduced conductive layer 65 is able to raise the temperature of the color indicating, heat sensitive material 70. The only way this can be accomplished is if layers 30 and 32 are *thermally* nonconductive. It would be illogical for anyone of ordinary skill in this art to understand that "nonconductive" layers 30 and 32 are somehow thermally conductive, since this would cause heat to flow away from color indicating, heat sensitive material 70 and would not permit material 70 to receive heat to undergo a visible color change to indicate the remaining strength of the battery, as is described. Likewise, in order for the current to be able to flow through conductive layer 64, "nonconductive" layers 30 and 32 must also be *electrically* nonconductive, or else the device would short circuit.

18. Additionally, the portion of the chamber, cell or bubble below the conductive layer and the air pocket (see Sections I.A. and I.F.) are inherently thermal insulative and independently provide adequate support to provide adequate support [sic] for the thermal insulation limitation. As such, it is the natural result of such construction that the nonconductive layer (30 or 32) adjacent to the battery housing, along with any portion of the sealed chamber or zone 66 beneath the conductive area 65, has both sufficient electrical insulation to prevent short circuiting and sufficient thermal insulation to overcome heat sinking when the battery strength indicator is in contact with the battery housing. The reference to repeated use of this embodiment of the battery strength indicator at column 9, lines 1-3 also requires that heat sinking to the battery housing be overcome by the thermal insulation beneath the conductive area 65 of layer 64.

19. In connection with the battery housing, dry cell batteries of the type shown in Fig. 2 of Burroughs et al. patent and described elsewhere as nonrechargeable alkaline batteries (column 11, line 42) or zinc-carbon batteries (column 12, line 63) all have electrically conductive housings. In a case of alkaline dry cells, the side of the housing is part of the cathode. In the case of zinc-carbon batteries, the side of the housing is part of the anode. Thus, I believe that the Burroughs '544 patent inherently discloses that the dry cell battery housing is electrically conductive.

20. Fig. P-1 below is a side elevational view of a thermal and electrical model of the heat sensitive battery strength indicator embodiment shown

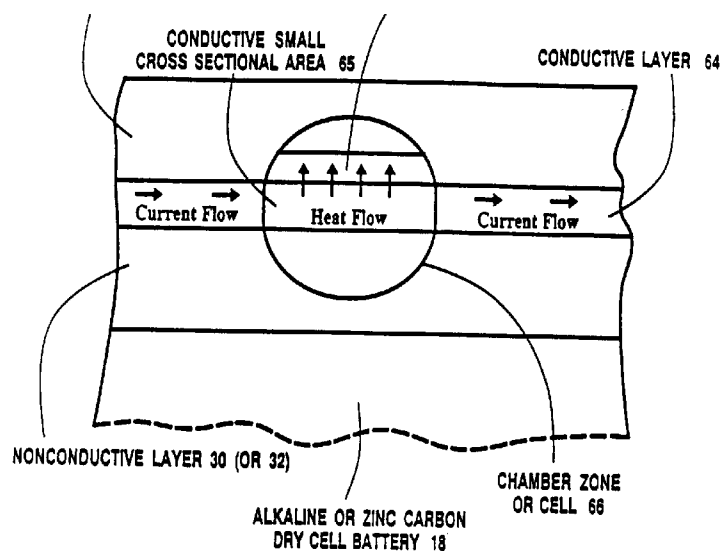


FIG P-1

in Fig. 10 of the '544 patent. While Fig. P-1 does not appear in the '544 patent as such, it is based entirely on the disclosure of the Burroughs '544 patent, and is intended to show the relative positions of the various components and the actual flow of heat and current as described in the patent.

The relative positions of the features of Fig. P-1 are supported by the '544 patent specification as follows, with the feature numbers shown bold in brackets corresponding to those shown in Fig. 10. Specifically, at column 4, lines 21-38, the specification states:

[T]he battery strength indicator means comprises: (a) a first nonconductive layer [30]; (b) a second nonconductive layer [32] attached to the first nonconductive layer, a portion of the first and second nonconductive layers forming a chamber [66] therebetween; (c) a conductive layer [64] sandwiched

between said first and second nonconductive layers, the conductive layer reduced to a small cross-sectional area [65] in the chamber; and (d) a heat sensitive color indicating material [70] in said sealed chamber that is adapted to undergo a color change when its temperature exceeds or crosses a predetermined value, said conductive layer in the chamber rising to a predetermined temperature when the voltage of the current flowing therethrough exceeds a predetermined value.

The battery strength indicator is attached to the side of a dry cell battery [18] in accordance with Fig. 2 and the disclosure at column 6, lines 15-29. The housings of both the nonrechargeable alkaline and zinc-carbon dry cell batteries disclosed in the '544 patent at column 11, line 42 and column 12, line 63 are electrically conductive. The heat sensitive color indicating material [70] is above the conductive layer reduced area in the sealed chamber in accordance with the top plan view shown in Fig. 10. Pyrotechnic chemical 68 is not shown in accordance with the alternate embodiment disclosed at column 8, lines 62-66. The current and heat flow as shown in Fig. P-1 above are disclosed at column 8, lines 45-54 and 62-66.

21. In my opinion, the current and heat flow model shown in Fig. P-1 is the necessary and only reasonable construction which one of ordinary skill in the battery art would give to this embodiment of the strength or voltage indicator disclosed in the Burroughs '544 patent. As I believe would be recognized by one of ordinary skill in the battery art, nonconductive layers 30 and 32 would be inherently recognized as having both sufficient thermal nonconductivity and sufficient electrical

nonconductivity to permit the heat and current flow to make the device operable, since the absence of either would make the device inoperable. Further, in my opinion, the natural result flowing from this embodiment of the strength or voltage indicator disclosed in the Burroughs '544 patent, which one of ordinary skill in the battery art would recognize, is that the conductive layer has sufficient thermal insulating means under its surface to overcome heat sinking when the device is in contact with an electrically conductive portion of the battery housing.

22. Consistent with the above, nowhere in the Burroughs '544 patent is the term "nonconductive layer" specifically limited to *electrically* nonconductive materials, nor is it disclosed as being thermally *conductive*. It is my opinion that a person of ordinary skill in the art pertaining to battery design and construction, when reading the Burroughs '544 patent, would understand that, at least in connection with the embodiment of the battery strength indicator depicted in Fig. 10, the term "nonconductive layer" refers to both thermally and electrically nonconductive. This would be inherently understood because of the fact that both controlled heat flow and controlled current flow are discussed. For the strength indicator to operate as described, one would require thermal insulation in order for the heat from the reduced section area 65 to flow to the heat sensitive material 70, as well as electrical insulation in order to prevent the current flowing through conductive layer 64 and reduced section 65 to short circuit against the battery housing.

23. In some specific instances described in the Burroughs '544 patent, the

nonconductive layers are described with regard to their electrically nonconductive function. For example, in the indicator device 10F shown in Fig. 15, nonconductive layer 30 is described as having a "high dielectric constant" so as to be able to control the electric field generated across cell 12 by electrodes 62a and 62b. In my opinion, this does not contradict the inherent and explicit disclosure of the capabilities of the nonconductive layers 30 and 32 in controlling heat flow in connection with the Fig. 10 embodiment, but merely makes reference to their concurrent dielectric properties in the Fig. 15 embodiment.

24. My opinion is supported by the various dictionaries that I have consulted, including the *Dictionary of Physics*, which define the term "conductor" or "conductive" as including both thermal conductivity and electrical conductivity. As such, the opposite term "nonconductive" would necessarily encompass both thermal insulation and electrical insulation properties, unless specifically limited to one or the other. My opinion of the nature and understanding of the term "nonconductive" in connection with layers 30 and 32 is supported by my experience that the vast majority of nonconductive materials display both thermal and electrical insulating properties. It is my opinion that a person having ordinary skill in the art relating to battery design and construction would necessarily select a nonconductive material which would have both thermal insulating and electrical insulating properties, without undue experimentation. I am aware of one exception, diamond, which is a good electrical nonconductor while also being a good thermal conductor. I believe that it would be illogical, if not absurd, that anyone of ordinary skill in the art reading the '544 patent would somehow understand that the nonconductive layers,

attached to a disposable battery, would be constructed of diamond, so as to be thermally conductive and electrically insulative.

Also, the party Burroughs et al. relies upon Dr. Powers' testimony at BR 63 and 64. Dr. Powers testified that he had performed an experiment to determine the operability of a heat sensitive battery strength or voltage indicator on the side of a battery without special precautions taken to prevent heat sinking from the conductive layer to the conductive battery housing. In the experiment he used a strip tester as described in the Parker '020 patent and Kiernan patent and found that heat sinking is not a problem.

In addition, the party Burroughs et al. relies upon the testimony of Dr. Alan Salkind, one of the party Cataldi et al.'s witnesses called by the party Wang et al.; Dr. Feder, an expert testifying on behalf of the party Cataldi et al.; and Mr. Patrick D. Hein, a witness for the party Cataldi et al.

Dr. Salkind testified that he presumed that the nonconductive layer is both thermally nonconductive as well as electrically nonconductive. BR 2903. Dr. Feder testified with respect to (Burroughs et al. Exhibit 5 (BX 5)), which is directly analogous to the thermal battery strength indicator described in the Burroughs et al. patent, that nonconductive would normally

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mean either electrically or thermally nonconductive. BR 3938 to 3939.

Mr. Patrick D. Hein testified on the problem of heat sinking when a battery strength or voltage indicator is attached to a battery. CR 1075 to 1081. Mr. Hein testified that he tested various materials and found that group III materials (ten thin synthetic polymeric films having thicknesses ranging from 0.001 to 0.005 inches) had severe heat sinking problems. CR 1077, 1078, 1080 and 1081.

With respect to the heat sinking problem in the context of this interference, Mr. Hein testified at CR 1143 that heat sinking creates difficulties, i.e., it decreases the observed temperature profile on the battery tester/voltmeter when it is in proximity to a battery container, thus displaying inaccurate or incorrect readings when the tester mechanism is activated.

Mr. Hein explained at CR 1194:

In the case of a fresh cell with the temperature profiles that we exhibited, for an example, it [the fresh cell] might show that it had only three-quarters of available power, when, in effect, it was the fresh cell that had 100 percent available power.

However, Mr. Hein acknowledged at CR 1195 that one could get an accurate good/bad type reading if the tester mechanism was properly designed. He also testified at CR 1195 and 1196:

Q. Now, within the context of the type of tester that was applied in the batteries in your declaration where there is a scale, could one compensate by condensing the scale of the sensor to compensate for some heatsinking effects?

A. I don't understand what you mean by compensating the scale or condensing the scale. Can you clarify that?

Q. If one were to reduce the scale of the sensor so that it was measuring less of a difference from the lowest level to the highest level, could such a reduced scale of sensor compensate for the heatsinking effects that you talk about with regard to the second group of materials?

A. If I understand the intent of your question, you're looking at condensing the scale to make it more like a -- just an on/off, good/bad, one or the other?

Q. It's going in that direction, yes.

A. The device could be designed that way if you so desired it to work that way. I don't think that there's a practical use if the scale would be condensed, but that's my opinion.

Q. What are other variables that would affect the reading on the thermal indicator that you tested? For example, would the electrical resistance of the heating element have an effect?

A. The electrical resistance of the heating element, the design of the taper of the element itself creating the -- controlling the current flow through the resistive -- or the conductive element of the tester, that will have an effect.

The color changing point of the thermochromic material will have an effect on the overall design of the tester mechanism. Those are the two biggest factors in regards to the tester mechanism itself.

Q. Will the thickness of the insulation also have an effect?

A. Yes.

As explained by the party Burroughs et al. on pages 132 and 133 of its opposition brief,

In the heat sensitive indicator embodiment of Fig. 10 (summarized at column 4, lines 21-38 and described further at column 8, line 26 through column 9, line 3), nonconductive layers 30 and 32 are located above and below the conductive layer 64 and the reduced cross section area 65 in indicator zone 66. Heat generated by the current through the reduced cross section area 65 of the conductive layer is described as raising the temperature of color indicating, heat sensitive material 70 to cause material 70 to undergo a visible color change when the battery has a predetermined minimum voltage output. The indicator device shown would not function without shielding provided by some type of nonconductive (either electrically or thermally) layer if applied to an electrically conductive portion of a dry cell battery housing as described. The natural result of the use of the nonconductive layer 30 or 32 below the conductive layer 64 and reduced area 65 is to permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material and indicate voltage when the voltage indicator is in contact with the battery housing.

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Opinion re: item (5)

After having considered the evidence and the arguments of the parties, we are persuaded by the party Burroughs et al. that its patent specification adequately discloses the limitation, "sufficient means under one of its [the conductive layer's] surfaces to permit the heat generated" by the conductive layer to change the color of the temperature sensitive color indicator, that this limitation is supported by, and does not require, a finding of thermal insulation in the lower nonconductive layer 30 or 32, and that the limitation is supported by the electrical insulation of the nonconductive layer.

In our view, the battery strength indicator disclosed in Figure 10 and described at column 8, line 26 to column 9, line 3, of the Burroughs et al. patent is presumed to be operative. In re Jacobs, 318 F.2d 743, 745-46, 137 USPQ 888, 889 (CCPA 1963) and Field v. Knowles, 183 F.2d 593, 600-01, 86 USPQ 373, 378-79 (CCPA 1950). The party Cataldi et al. has not sustained its burden to show that the indicator of Figure 10 cannot be made to operate for any practical or useful purpose by such changes and alterations, short of invention, which one skilled in the art would be capable of applying in constructing the indicator with the disclosure of the Burroughs et al. specification and its

figures as his guide. Consequently, we agree with the party Burroughs et al. that since its patent discloses and claims the particular embodiment of the temperature sensitive voltage indicator over a nonconductive layer attached to the side of a battery, this embodiment must be presumed to be operative, i.e., the lower nonconductive layer must inherently have sufficient thermal insulating means to overcome heat sinking when the voltmeter is in contact with a battery having an electrically conducting housing. Furthermore, the Burroughs et al. specification is sufficient to show that the natural result flowing from the operation of the device of Figure 10 is to permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material. See Hansgirk v. Kemmer, 102 F.2d 212, 40 USPQ 665 (CCPA 1939) and In re Reynolds, 443 F.2d 384, 389, 170 USPQ 94, 98 (CCPA 1971). In In re Reynolds, 443 F.2d 384, 389, 170 USPQ 94, 98, the court resolved an issue of inherent disclosure in an analogous case ("means for preventing an abrupt change in the capacitance . . .") in favor of an applicant by the disclosure of the drawing and the knowledge that a person skilled in the art would suspect that there was some reason for the relationships shown in the drawing and would not regard such disclosure as accidental or arbitrary. The Court also quoted with approval Technicon Instruments Corp.

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v. Coleman Instruments, Inc., 255 F. Supp. 630, 150 USPQ 227 (N.D. Ill. 1966), aff'd 385 F.2d 391, 155 USPQ 369 (7th Cir. 1967):

By disclosing in a patent application a device that inherently performs a function, operates according to a theory, or has an advantage, a patent applicant necessarily discloses that function, theory or advantage even though he says nothing concerning it.

In In re Smythe, 480 F.2d 1376, 1385, 178 USPQ 279, 285-286 (CCPA 1973), the court stated that the forgoing principle applies to the description requirement under 35 U.S.C. § 112.

That the Burroughs et al. specification contains a sufficient disclosure is also consistent with the testimony of experts relied by the opposing parties.

Both Drs. Feder and Salkind, witnesses under the control of the party Cataldi et al., testified that the term nonconductive meant thermally nonconductive or electrically nonconductive.

Mr. Hein, a witness for the party Cataldi et al., testified at CR 1195 that if a tester mechanism (a battery voltage indicator) were properly designed one could avoid a heat sinking problem and obtain an accurate good/bad type reading. Such design alterations would include reducing the scale of the sensor to compensate for heat sinking, varying the resistance of the heating element, or the taper of the element to control the

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current flow, or varying the thickness of the nonconductive layer. Mr. Hein's testimony makes clear that the battery tester of Burroughs et al.'s Figure 10 would operate in a crude manner, giving good/bad readings for a battery to be tested. This is sufficient to show that the device of Figure 10 is operative, since it is settled that a commercial performance is not necessary in order to have an operative disclosure. Field v. Knowles, 86 USPQ 378-379.

We have also reviewed the decisions of Ex parte Parks, 39 USPQ at 1234, and Schriber-Schroth Co. v. Cleveland Trust Co., 305 U.S. at 47, 39 USPQ at 242, which are relied upon by the party Cataldi et al. These decisions are not apposite to the situation here.

In Parks, the invention was to a method in which the prior art normally used a catalyst and the lack of mention of a catalyst in the Parks specification conveyed to persons of ordinary skill in the art the limitation of "in the absence of a catalyst." Likewise, in the Burroughs et al. patent, the particular structure of the nonconductive layer provides adequate support to convey to one of ordinary skill in the art possession of the concept of "sufficient means under one of its [the conductive layer's] surfaces to permit the heat generated" by the conductive layer to change the color of the temperature sensitive

color indicator as required by the claims. Contrary to the party Cataldi et al.'s arguments, the Burroughs et al. specification does not cry out for the specific term thermal in view of the fact that the structure disclosed under the conductive layer permits the operation of the heat sensitive voltage or strength indicator. The containment and control of heat flow is specifically described between "nonconductive" layers 30 and 32 in connection with the embodiment shown in Figure 10. The concept of thermal insulation is inherent in, and the natural result of, the structure, features and operation of the heat sensitive indicator disclosed in the Burroughs et al. patent.

In Schriber-Schroth, the patentee was attempting to justify support for a "flexible web" element in the face of his specification which described the webs as extremely rigid. The court found that an inherency argument could not fly in the face of the description of the web having the antithetical quality of rigidity. On the other hand, the Burroughs et al. specification describes the properties of the lower conductive layer which are fully consistent with the concept of thermal insulation.

We have also reviewed the testimony of Dr. Powers, which is relied upon by the party Cataldi et al. as an admission that the term, conductive, throughout the Burroughs et al. specification is used in the electrical sense. Although Dr. Powers acknowledged that conductive is used in the electrical

sense, that does not constitute an admission that nonconductive does not mean thermally nonconductive. We are not persuaded that Dr. Powers admitted that the nonconductive layer of the device of Figure 10 is thermally conductive.

We have given weight to Dr. Powers' testimony and find his testimony credible, since it is consistent with the testimony adduced from witnesses associated with the opposing parties. To the extent the party Cataldi et al. urges that Dr. Powers' testimony is not credible, because he could not determine whether Figure 10 of the Burroughs et al. patent was a top view or a side view (see our decision on item 1, supra), he accurately depicted his figure P-1, at paragraph 20, as a side view.

Consequently, we hold that the Burroughs et al. specification contains a written description for the limitation, "sufficient means under one of its [the conductive layer's] surfaces to permit the heat generated" by the conductive layer to change the color of the temperature sensitive color indicator, of reissue claims 16, 18 to 20, 22 and 23. For the foregoing reasons, the motion is denied as to item 5.

In item 6, the motion urges that the Burroughs et al. specification does not contain a written description for the limitation, "means between the conductive layer and the battery housing to permit" the heat generated by the conductive layer to change the color of the temperature sensitive color indicator

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material and indicate voltage of reissue claims 24 to 29. The motion relies upon the testimony of Dr. Feder at CR 53 to 57 and 64. Dr. Feder testified that the Burroughs et al. specification does not disclose means between the conductive layer and the battery which performs a thermal insulating function to allow heat generated by the conductive layer to sufficiently heat the heat-sensitive color indicator material.

As we noted in our decision on item 5, supra, the Burroughs et al. specification is sufficient to show that the natural result flowing from the operation of Figure 10 is to permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material. Accordingly, for the reasons given in item 5, supra, the motion is denied as to item 6.

In item 7, the motion urges that the Burroughs et al. specification does not contain a written description for the "air pocket" limitation of reissue claims 30 to 32 and 40. The motion relies upon the testimony of Dr. Feder at CR 65 and 66. With respect to claims 30 to 32, Feder testified that the Burroughs et al. specification does not disclose an air pocket as a part of the temperature sensitive color indicator, the indicator device 10D of Figure 10, but rather discloses the air pocket as being

associated with the electrical switch. Moreover, the party Cataldi et al.'s opening brief states at page 101 that on cross-examination, "Dr. Powers admitted that the party Burroughs et al.'s specification did not support the 'air pocket' recitations." With respect to claim 40, which recites that the "insulating means is an air pocket under the dielectric substrate under the area of the conductive layer," Dr. Feder testified that the concept of an air pocket as a part of thermal insulating means is not taught by the Burroughs et al. specification. The motion is denied with respect to item 7.

We have reviewed the testimony of Dr. Powers, referred to in Sections 294 and 295 of the party Cataldi et al.'s proposed findings of fact, and do not agree with the party Cataldi et al. that Dr. Powers admitted at BR 177 to 179 that the Burroughs et al. specification lacked support for the air pocket being a part of the temperature sensitive color indicator. A fair reading of the testimony shows that Dr. Powers is of the view that the Burroughs et al. specification has inherent support for the air pocket being a part of the temperature sensitive color indicator. As we found in item 2, supra, the Burroughs et al. specification contains a sufficient written description for the indicator device being in the shape of a chamber, cell or bubble. Because of this shape, we necessarily agree with the party Burroughs et al. that the chamber, cell or bubble would also contain an air

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pocket, especially where the specification does not teach that the chamber, cell or bubble is formed under a vacuum. One skilled in the art would appreciate that air must be present in the chamber, cell, or bubble because of its manufacture at standard conditions (temperature and pressure) and that the air pocket in the chamber, cell, or bubble of the device 10D would also supply some thermal insulation. Accordingly, we hold that the Burroughs specification contains a sufficient written description within the meaning of 35 U.S.C. § 112, first paragraph, for the "air pocket" limitation of reissue claims 30 to 32 and 40.

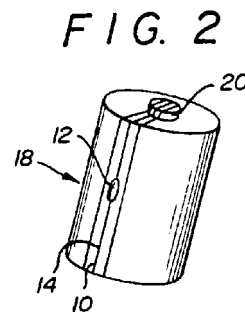
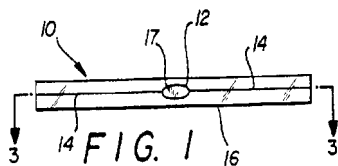
For the foregoing reasons, the motion is denied as to item 7.

In item 8, the motion urges that the Burroughs et al. specification does not contain a written description for the "thermal insulation" limitation of reissue claims 33 to 40 and 43 to 49. Since claims 34 and 38 were canceled, this item will be treated as to claims 33, 35 to 37, 39, 40 and 43 to 49. The motion relies upon the testimony of Dr. Feder at CR 66 to 68. The motion is denied for the reasons set forth above with respect to items 5 and 6, supra.

In item 9, the motion urges that the Burroughs et al. specification does not contain a written description for the "label" limitation of reissue claims 33 to 40, and 43. Since

claims 34 and 38 were canceled, this item will be considered as to claims 33, 35 to 37, 39, 40 and 43. Independent claim 33 recites "[a] label comprising an integral battery voltmeter." Independent claim 37 recites "[a] battery having a label with an integral voltmeter." The motion relies upon the testimony of Dr. Feder at CR 68 to 70, who testified that Burroughs et al.'s Figure 2 shows the interrelationship between the battery 18 and the indicator device 10, that the specification states that the figure depicts a battery having a battery strength indicator and that the figure shows no thickness for the indicator device. Dr. Feder testified that since thickness is intimately related to the heat transport between the device and the battery, the lack of thickness emphasizes the fact that Burroughs et al.'s specification does not teach the need for thermal insulation and that nothing in Figure 2 or in the description thereof corresponds to a label. We disagree.

Figures 1 and 2 are as follows:



The Burroughs et al. specification reads at column 6, lines 4 to 29 as follows:

Referring to FIG 1, a battery-strength indicator device 10 of the present invention is illustrated. The indicator device has an indicator chamber, cell or bubble 12 formed in strip 16. Preferably the cells of the present invention are sealed cells. Conductive layers 14 run the length of the strip into the indicator bubble to form spaced apart electrodes. The indicator bubble contains an indicating material 17 which undergoes a visible change when the voltage potential across the indicator cell exceeds a predetermined value. At least one side of the strip 16 is transparent or translucent.

The improved battery 18 of the present invention is illustrated in FIG. 2. The battery has an anode 20 and a cathode at its base (not shown). The indicator device 10 is attached to the side of the battery, with the ends of the device connected to the anode 20 and the cathode. If the device is a constant-drain device, that is, the device is on continuously, the indicator cell undergoes a visible change when the output voltage of the battery drops below a predetermined value. In an alternative embodiment, the battery has the indicator device of FIG. 1A, which includes a strip 16, conductive leads 14, an indicator cell 12, and a switch 24. The switch is biased to be in an off position, and, thus the indicator device is only actuated when the switch is on, thus preventing a constant drain on the battery.

Dr. Powers acknowledged that the term, "label," is not disclosed in the Burroughs et al. specification.

In this regard, Dr. Powers testified that . . .

the tester is integral with the battery and to be usable it has to be on the outside of

the battery. You can't see it inside the battery; and, therefore, it would have to constitute part of the label if there's a label on the battery. [BR 149]

* * * *

Q. Can you tell me that support for a battery having a label -- let me rephrase that. For the element a battery having a label, can you tell me what support you have for your belief that it is sufficiently disclosed to enable a person skilled in the art to make and use the battery having a label?

A. I can only say I don't know why you make and use it unless you put it on the label as part of the label. [BR 150]

* * * *

Q. Can you provide for me the support in the specification in the '544 patent for your belief that the patent discloses -- adequately discloses how to make a label with an integral voltmeter?

Mr. Peterson: Including the drawings again.

Mr. Esatto: Including the drawings.

The Witness: My conclusion is based on the fact that time and time again the patent teaches that the voltmeter is integral with the battery and I believe it is mentioned -- here with the housing. The only way it can be integral with the battery and be usable technically is if it is on a portion of the label. That's just common sense. [BR 153]

To comply with the written description requirement of 35 U.S.C. § 112, first paragraph, it is not necessary that the application describe the claimed invention in ipsis verbis, In re Lukach, 442 F.2d at 967, 169 USPQ at 796 (CCPA 1971); all that is

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required is that it reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. In re Driscoll, 562 F.2d at 1245, 195 USPQ at 434 (CCPA 1977). Thus, Dr. Powers' acknowledgment that the term, "label," is not disclosed in the Burroughs et al. specification does not mean that the Burroughs et al. specification does not reasonably convey to persons skilled in the art that the Burroughs et al. inventors did not have possession of the label limitation of claims 33 to 40, and 43.

We agree with the party Burroughs et al.'s opposition brief, pages 143 and 144, that in common usage one of ordinary skill in the art would understand that the term "label," as defined in Webster's Third New International Dictionary (1964 Edition) (BX 18), refers to something affixed to the surface of an article, usually a layer, to provide information concerning the article. The Burroughs et al. specification, column 6, lines 4 to 29, refers to a strip which is attached to the side of a battery 18 (Fig. 2) and which contains an indicator chamber cell or bubble formed in the strip, i.e., an indicator device. Since this strip containing the indicator device is designed to indicate the strength of the battery and provide such information to the user, the strip 12 fully and adequately discloses a

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"label" and the "label with an integral voltmeter." For this reason, we find the testimony of Dr. Powers to be credible where he urges that the battery indicator device which is carried on strip 12 constitutes a label. Accordingly, the motion is denied with respect to this limitation.

In item 10, the motion urges that the Burroughs et al. specification does not contain a written description for the "thermochromic inks," "thermochromic tapes," and "crystalline materials" limitations of reissue claims 41 and 48. The motion relies upon the testimony of Dr. Feder at CR 70 to 72, who testified that Burroughs et al.'s specification does not disclose or suggest thermochromic inks or thermochromic tapes and using thermochromic ink in a voltage indicator device. Dr. Feder testified that the specification discloses using liquid crystalline materials not in an indicator device 10D but in embodiments that use voltage sensitive liquid indicator material and that have the indicator chamber, cell, or bubble that is used to hold the voltage sensitive liquid indicator material. The motion is denied.

We agree with the party Burroughs et al.'s opposition brief, pages 144 and 145, that the Burroughs et al. specification has sufficient written description for the foregoing limitations. Burroughs et al., column 6, lines 56 and 57, broadly disclose

that the indicator material "composition can be a liquid crystal composition." There is no limitation that this composition is used only for voltage sensitive indicator embodiments.

We agree with the party Burroughs et al.'s opposition brief, page 145, that the Burroughs et al. specification has sufficient written description for thermochromic. Thermochromic is defined in Webster's Third New International Dictionary (1964 Edition) (BX 18) as exhibiting thermochroism and thermochroism is defined as the phenomenon of reversible change of color of a substance with change of temperature. As such, thermochromic material is adequately supported by the disclosure in column 8, lines 66 to 68, of a color indicating, heat sensitive material which undergoes a nonpermanent color change when exposed to a predetermined temperature. The term, "thermochromic tapes," is equivalent to the strip or layer embodiments of the color indicating heat sensitive material as disclosed in column 8, lines 59 to 62, and column 11, lines 21 to 23.

For the foregoing reasons, the motion is denied as to item 10.

In item 11, the motion urges that the Burroughs et al. specification does not contain a written description for the "color to colorless," "colorless to color," and "one color to a second color" limitations, which are present in reissue claims

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32, 42, and 49. The motion relies upon the testimony of Dr. Feder at CR 72 and 73, who testified that Burroughs et al.'s specification, column 6, lines 48 to 52, only discloses that:

The indicator material can be any material that will undergo a visible change, such as a color change, when the voltage potential across the electrodes exceeds or drops below a predetermined voltage.

According to Dr. Feder, the foregoing recitation does not disclose colorless indicator materials or transitions from color to colorless or colorless to color for indicator materials. Further, Dr. Feder testified that the foregoing recitation is directed to those types of indicator materials which are voltage sensitive color indicator materials, not to heat sensitive color indicator materials. The motion is denied as to this item.

We agree with the party Burroughs et al.'s opposition brief, pages 146 and 147 that the Burroughs et al. specification has sufficient written description for the foregoing limitations. As noted by the party Cataldi et al., Burroughs et al., column 6, lines 48 to 52, disclose that the indicator material can be any material that will undergo a visible change, such as a color change. Burroughs et al., column 8, lines 59 to 62, teaches that one of the strips is made of a material that is sensitive to temperature and will undergo a visible change when the temperature exceeds a predetermined value. The term, "color

change," is a generic expression which embraces three embodiments, "color to colorless," "colorless to color," and "one color to a second color." Since the three embodiments are not patentably distinct from each other, the generic expression "color change" is considered to constitute a sufficient written description of the three embodiments. Cf. Bigham v. Godfredsen, 857 F.2d 1415, 1417, 8 USPQ2d 1266, 1268 (Fed. Cir. 1988) ("The generic term 'halogen' comprehends a limited number of species, and ordinarily constitutes a sufficient written description of the common halogen species provided that there is no patentable distinction among them.").

In item 12, the motion urges that the Burroughs et al. specification does not contain a written description for the "temperature insulating material" and the "thermal insulation material" limitations of reissue claims 39 and 46. The motion is denied for the reasons set forth above in the denial of items 5, 6, and 8, supra.

In item 13, the motion urges that the Burroughs et al. specification does not contain a written description for the "stand-offs" limitation of reissue claim 47, i.e., "the means to provide thermal insulation comprises standoffs on the dielectric layer adjacent the battery can, wherein the standoffs, the dielectric layer, and the battery can define an air pocket." The

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motion relies upon the testimony of Dr. Feder at CR 74 and 75, who testified that Burroughs et al.'s specification does not disclose a structure which has standoffs on a dielectric layer that are adjacent to a battery can. The motion is granted as to this item.

We agree with the party Cataldi et al. that the Burroughs specification does not contain a written description for the limitation, "the standoffs, the dielectric layer, and the battery can define an air pocket," as recited in claim 47. The Dictionary of Scientific and Technical Terms 1528 (2d ed., McGraw-Hill Inc., 1978) (Cataldi et al. Exhibit No. 68 (CX 68)) defines a stand off insulator as "an insulator used to support a conductor at a distance from the surface on which the insulator is mounted." This definition is consistent with Dr. Powers' testimony at BR 45 that a standoff is a structure which separates the conductive layer from the battery to form an air pocket. We reject the party Burroughs et al.'s argument that their chamber, cell or bubble below the conductive layer constitutes a standoff within the meaning of claim 47. While the air pocket may act as an insulating means, the air pocket is not formed by the standoffs, the dielectric layer, and the battery can as recited in claim 47. Accordingly, the motion is granted as to item 13.

In item 14, the motion urges that the Burroughs et al. specification does not contain a written description for the "coupling means" limitation of reissue claim 50. The motion relies upon Dr. Feder's testimony at CR 75 to 77 to show a lack of written description. The motion is granted as to this item.

In our decision on the party Cataldi et al.'s motion no. 2, supra, we held that this claim is indefinite. In so holding, we agreed with the party Cataldi et al. that the term "coupling means" is not defined in the Burroughs specification and that the specification does not show any structure for the coupling means. We rejected the party Burroughs et al.'s argument that the structure is shown where the pyrotechnic chemical is surrounded by the color indicating, heat sensitive material or by the alternative embodiment where the device is fabricated without the pyrotechnic chemical so that the heat sensitive material contacts the conductive area. The coupling means is not equivalent to the heat sensitive material contacting the conductive area, because no interaction other than contacting is specified.

In item 15, the motion urges that the Burroughs et al. specification does not contain a written description for the "means to transfer" limitation of reissue claim 51. The motion relies upon Dr. Feder's testimony at CR 77 and 78 to show a lack

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of written description. The motion is denied for the reasons set forth above in the denial of items 5, 6, 8, and 12, supra.

In summation, the Cataldi et al. motion no. 3 is denied with respect to the Burroughs et al. patent claims 1 to 11 and reissue claims 13 to 16, 18 to 20, 22 to 30, 32, 33, 35 to 37, 39 to 46, 48, 49 and 51 and is granted with respect to the Burroughs et al. reissue claims 17, 21, 31, 34, 38, 47 and 50. Judgment as to these latter claims is deferred to the next final hearing, since we do not enter a piecemeal judgment with respect to a party.

Issue (5)

The party Cataldi et al.'s opening brief requests that we decide whether the party Burroughs et al.'s reissue claims 1 to 51 are unpatentable on the ground of double patenting, as urged in motion no. 23.

The motion is dismissed as to reissue claims 1 to 11. 37 CFR § 1.633(a) authorizes a party to file a preliminary motion for judgment against an opponent's claim designated to correspond to a count. Since reissue claims 1 to 11 have not been designated to correspond to count 1, these claims are not a part of the interfering subject matter. Perkins v. Kwon, 886 F.2d 325, 327, 12 USPQ2d 1308, 1310 (Fed. Cir. 1989) ("The implementing rules provide not only for the threshold determination under 37 C.F.R. § 1.603 or § 1.606 that the

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interfering subject matter is patentable to both parties, but that after an interference is declared a party may move for judgment on the ground that the interfering subject matter is not patentable to the opponent. 37 C.F.R. § 1.66(a).") Thus this motion is clearly improper as to reissue claims 1 to 11.

Since we entered the party Burroughs et al.'s amendment in our decision on Issue (3), supra, we will consider motion no. 23 as it relates to reissue claims 13 to 16, 18 to 20, 22 to 33, 35 to 37 and 39 to 51.

A copy of the motion appears at CR 1664 to 1670. During ex parte prosecution of the party Burroughs et al.'s reissue application, the examiner rejected the reissue claims on the ground of obviousness-type double patenting over claims pending in three later filed applications. In response to the rejection, the party Burroughs et al. filed in accordance with 37 CFR § 1.321 terminal disclaimers in each of the three later filed applications disclaiming the terminal portion of the term of any patent granted on each of these later filed applications subsequent to the expiration date of the party Burroughs et al.'s involved U.S. Patent No. 5,015,544. In withdrawing the rejection, the examiner stated, in part:

Since this [reissue] application, if matured into a patent, cannot exceed the enforceable term of the original patent, the term of any patent issuing hereon cannot exceed the term

of any of the above named [three] applications. Therefore, a terminal Disclaimer filed in the instant application would be moot or otherwise unnecessary[,] as an extension of monopoly is not possible. [CR 1667]

On page 3 [CR 1668] of its motion, the party Cataldi et al. contends that the examiner was "simply wrong." The party Cataldi et al. contends that terminal disclaimers accomplish two results. They prevent a timewise extension of the patent property right and "also avoid the possibility that, if two patents come into different hands, third parties may be sued by both assignees for the same activities." According to the party Cataldi et al., the latter situation is not avoided in this case by the filing of terminal disclaimers in the three later filed applications. Rather, the examiner should have required the filing of a reciprocal terminal disclaimer in the party Burroughs et al.'s reissue application. This position is not well taken.

In response to a rejection of its reissue claims on the ground of obviousness-type double patenting, the party Burroughs et al. filed in accordance with 37 CFR § 1.321 terminal disclaimers in each of its three later filed applications. The examiner properly accepted the disclaimers and withdrew the rejection. We know of no authority for requiring the party

Burroughs et al.⁴³ to file a reciprocal terminal disclaimer in its involved reissue application. The party Cataldi et al.'s fears appear to have been addressed by the examiner. If any of the three later filed applications, if matured to patents, and the involved reissue application becomes assigned to an assignee other than that of the reissue application, the former will become unenforceable by operation of law since the disclaimers provide that any patent granted on any of the three later filed applications shall be enforceable only for and during such period that it and any patent granted on the involved reissue application is commonly assigned. Under such a circumstance, it does not appear possible that a suit by two different assignees could reasonably be expected.

For the foregoing reasons, the motion is denied.

Issue (6)

The party Cataldi et al.'s opening brief requests that we decide whether Burroughs et al.'s reissue claims 13 to 51 are unpatentable for failure to comply with 35 U.S.C. § 251, as urged in motion no. 24. Since we entered the party Burrough et al.'s amendment in Issue (3), supra, we will consider motion no. 24 as

⁴³ On page 152 of its opposition brief, the party Burroughs et al. has offered to file such a reciprocal terminal disclaimer if required.

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it relates to reissue claims 13 to 16, 18 to 20, 22 to 33, 35 to 37 and 39 to 51.

In the motion, the party Cataldi et al. urges at CR 1688 and 1689 that the party Burroughs et al.'s reissue claims 13 to 51 are not directed to the same invention as its original patent claims 1 to 11, because the party Burroughs et al. never alleged at the time of presentation of the reissue claims that reissue claims 13 to 51 are drawn to the same invention as the invention defined by its original claims 1 to 11. According to the party Cataldi et al., the party Burroughs et al.'s silence is an implicit admission that its newly presented claims 13 to 51 are not drawn to the same invention as the invention defined by its original claims 1 to 11. The party Cataldi et al. also notes that the involved Burroughs et al. reissue application contains claims 1 to 12 and 52 to 63 which have been designated as not corresponding to the count.

On pages 163 and 164 of its main brief, counsel for the party Cataldi et al. states that the CCPA and the Court for Appeals for the Federal Circuit have both "waffled back and forth" on what was originally called the "intent to claim" requirement of 35 U.S.C. § 251 and "what the Federal Circuit's latest effort in this field tells us is now to be called the 'original patent' requirement" of the statute. In support of its position, counsel cites two lines of cases (In re Weiler, 790

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F.2d 1576, 229 USPQ 673 (Fed. Cir. 1986) and In re Amos, 953 F.2d 613, 21 USPQ2d 1271 (Fed. Cir. 1991), which he cannot harmonize. Despite this lack of harmonization, counsel urges that his motion should be granted. The motion is denied.

As the moving party, the party Cataldi et al. has the burden of proof by a preponderance of the evidence on the motion. Kubota v. Shibuya, 999 F.2d at 519, n.2, 27 USPQ2d at 1420, n.2. The party Cataldi et al. has not sustained its burden since the motion does not analyze each of the reissue claims 13 to 51 vis-à-vis each of the original patent claims 1 to 11 to demonstrate that each reissue claim is not directed to the same invention as the original patent claims. See 37 CFR § 1.637(a). Rather, the party Cataldi et al. relies upon the party Burroughs et al.'s silence as an implicit admission that reissue claims 13 to 51 are not drawn to the same invention as patent claims 1 to 11. We find no admission under the foregoing circumstance.

Notwithstanding the foregoing, we have nonetheless reviewed the party Burroughs et al.'s reissue claims and agree with the party Burroughs et al. that these claims are drawn to the same invention as the invention defined by its original claims 1 to 11. In other words, the party Burroughs et al. is not claiming subject matter entirely different from anything anywhere earlier claimed, but rather is seeking to obtain broadened claims to subject matter claimed in its patent.

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Original patent claims 1 to 11 are directed to "[a] battery having a battery strength indicating means to indicate the strength of the battery." Independent reissue claims 13, 16, 20, 24, 30, 33, 37, 44, 50 and 51, respectively, are directed to "[a] battery having a voltage indicator [to indicate the voltage of the battery]," "[a]n article comprising an integral battery voltage indicator [to indicate voltage]," "[a] battery having an article with an integral voltage indicator [to indicate voltage]," "[a] battery with an integral voltage indicator [to indicate the voltage of the battery]," "[a] battery having a voltmeter [to indicate the voltage of the battery]," "[a] label comprising an integral battery voltmeter [to affect a change in the temperature sensitive color indicator layer]," "[a] battery having a label with an integral voltmeter [to affect a change in the temperature sensitive color indicator layer]," "[a] battery with an integral voltmeter [to affect a color change in the temperature sensitive color indicator layer]," "[a]n article comprising an integral battery voltage indicator [to affect a change in the temperature sensitive color indicator material]," and "[a] battery having an integral battery voltage indicator [to affect a change in the temperature sensitive color indicator material]."

In our view, the foregoing claims are all directed to the same invention, a battery having an attached voltage

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indicator to indicate the strength of the battery. Label claim 33 is directed to a subcombination of the combination recited in claim 37 "[a] battery having a label."

For the foregoing reasons, motion no. 24 is denied.

Issue (7)

The party Cataldi et al.'s opening brief requests that we decide whether Cataldi et al.'s proposed count 4 should be substituted for count 1, as urged in motion no. 32.

The motion is dismissed as moot. Neither the party Cataldi et al.'s preliminary statement with respect to count 1 nor its statement with respect to proposed count 4 overcomes the filing date of the party Burroughs et al. Thus, a possible substitution of proposed count 4 for count 1 would not forestall the entry of judgment against the party Cataldi et al.

Patentability of the party Cataldi et al.'s reissue claims

Issues (9 to 11)

With respect to issue (9), the Burroughs et al. brief no. 1 requests that we decide whether the party Cataldi et al.'s reissue claims 9 to 13, 18 to 22, 28 to 32, 35, 37, and 39 are unpatentable over the involved Burroughs et al. patent.

With respect to issue (10), the Burroughs et al. brief no. 2 requests that we decide whether the party Cataldi et al.'s patent claims 1 to 29 are unpatentable over the involved Burroughs et al. patent.

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With respect to issue (11), the Burroughs et al. brief no. 4 requests that we decide whether judgment under 37 CFR § 1.662(b) should be issued against the party Cataldi et al. for filing a second reissue application which cancels all of its patent claims 1 to 29 which correspond to the count and which asserts that the newly added reissue claims 30 to 44 are patentably distinct from the original patent claims.

Since we are issuing judgment against the party Cataldi et al. for the failure of its preliminary statement to overcome the filing date of the senior party Burroughs et al., the party Cataldi et al.'s patent claims 1 to 29 and its reissue claims 9 to 13, 18 to 22, 28 to 32, 35, 37, and 39 are considered unpatentable. Since the party Cataldi et al. is not entitled to its claims corresponding to the count pursuant to 35 U.S.C. § 102(g), it is not necessary for us to decide whether the claims are also unpatentable over prior art or under 37 CFR § 1.662(b). Accordingly, the issues raised in these briefs are dismissed as moot.

JUDGMENT

Judgment with respect to the subject matter of the count in issue is hereby entered against Richard T. Cataldi, Patrick D. Hein, Henry J. Heirigs and John C. Leo, the junior party. Accordingly, on the present record, the party Cataldi et

Interference No. 103,036

al. is not entitled to a patent containing its patent claims 9 to 29 and its reissue claims 9 to 25 and 28 to 40.

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| STANLEY M. URYNOWICZ, JR. |) | |
| Administrative Patent Judge |) | |
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| |) | BOARD OF PATENT |
| RONALD H. SMITH |) | APPEALS AND |
| Administrative Patent Judge |) | INTERFERENCES |
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| MICHAEL SOFOCLEOUS |) | |
| Administrative Patent Judge |) | |

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 803

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

CHI-CHUNG WANG, TERRY C. EISENSMITH, CHARLES E. KIERNAN
AND ROBERT L. MILANESE

Junior Party,⁴⁴

v.

GARY R. TUCHOLSKI

Junior Party,⁴⁵

v.

RICHARD T. CATALDI, PATRICK D. HEIN, HENRY J. HEIRIGS
AND JOHN C. LEO (PATENT)

Junior Party,⁴⁶

⁴⁴ Application 07/730,712, filed July 16, 1991. Assignors to Duracell International Inc.

⁴⁵ Application 07/641,394, filed January 15, 1991. Assignors to Eveready Battery Co., Inc., St. Louis, MO.

⁴⁶ Application 07/504,504, filed April 4, 1990, now U.S. Patent No. 5,059,895, issued October 22, 1991. Assignors to Eastman Kodak Co.

Interference No. 103,036

RICHARD T. CATALDI, PATRICK D. HEIN, HENRY J. HEIRIGS
AND JOHN C. LEO (REISSUE)

Junior Party,⁴⁷

v.

JAMES R. BURROUGHS AND ALAN N. O'KAIN (PATENT)

Junior Party,⁴⁸

JAMES R. BURROUGHS AND ALAN N. O'KAIN (REISSUE)

Senior Party.⁴⁹

Interference No. 103,036

REMAND AFTER HEARING MAY 29, 1997

Before URYNOWICZ, RONALD H. SMITH, and SOFOCLEOUS, Administrative
Patent Judges.

SOFOCLEOUS, Administrative Patent Judge.

FINAL DECISION WITH RESPECT TO THE PARTY WANG ET AL.

⁴⁷ Reissue Application 07/942,973, filed September 10, 1992. Accorded Benefit of U.S. Applications 07/504,504, filed April 4, 1990, and 5,059,895, issued October 22, 1991. Assignors to Eastman Kodak Co.

⁴⁸ Application 07/308,210, filed February 8, 1989, now U.S. Patent No. 5,015,544, issued May 14, 1991. Assignors to Strategic Energy, Ltd.

⁴⁹ Reissue Application 07/963,915, filed October 20, 1992. Accorded Benefit of U.S. Application No. 07/308,210, filed February 8, 1989, now Patent No. 5,015,544, issued May 14, 1991. Assignors to Strategic Energy Ltd.

Interference No. 103,036

The subject matter of this interference relates to a battery with a strength indicator. The count of this interference is as follows:

Count 1

A battery having a label with an integral voltmeter; wherein the voltmeter comprises:

- A) a dielectric layer;
- B) a conductive layer above or below the dielectric layer; and
- C) a temperature sensitive color indicator layer in thermal contact with the conductive layer, characterized in that 1) the conductive layer has i) sufficient heat generating capacity to affect a change in the temperature sensitive color indicator layer and ii) sufficient thermal insulating means under one of its surfaces to overcome heat sinking when the voltmeter is in contact with a battery having an electrically conducting housing and 2) the voltmeter includes means for forming an electrical switch with the electrically conductive battery housing.

The party Wang et al.'s claims 22 to 24 and 43 to 63, the party Tucholski's claims 1 to 35 and 46 to 70, the party Cataldi et al.'s patent claims 9 to 29, the party Cataldi et al.'s reissue claims 9 to 25 and 28 to 40, the party Burroughs et al.'s patent claims 1 to 11 and the party Burroughs et al.'s reissue claims 13 to 51 correspond to the count.

In Interlocutory Order No. 2, dated May 10, 1996 (Paper No. 494), the Administrative Patent Judge (APJ) listed and acknowledged the 91 preliminary and miscellaneous motions and

requests, the various oppositions, replies thereto and comments⁵⁰ to various oppositions and replies, filed by the parties. In addition, the APJ opened preliminary statements and ordered their service. At the same time, the APJ placed the junior parties Tucholski and Cataldi et al. under an order to show cause why judgment should not be entered against them in view of the fact that the dates alleged in their preliminary statements did not overcome the filing date of the senior party Burroughs et al.

The junior parties Tucholski and Cataldi et al. filed responses to the show cause order. The purpose of this final hearing⁵¹ is to determine whether the junior parties Tucholski and Cataldi et al. have shown sufficient cause to avoid the entry of judgment against them. In the concurrent decisions accompanying this order, we have held that the junior parties Tucholski and Cataldi et al. did not show sufficient cause to avoid the entry of judgment against them and accordingly issued judgment against those parties.

ISSUES

⁵⁰ In an order, dated December 12, 1994 (Paper No. 77), the APJ in charge of the interference at that time authorized the parties to file comments in support of or in opposition to a motion directed at another party.

⁵¹ This decision addresses the issues raised by the party Wang et al.; the accompanying final decisions address the issues raised by the parties Tucholski and Cataldi et al.

Interference No. 103,036

On pages 1 to 3, the party Wang et al.'s opening brief refers to motions filed by the parties Tucholski and Cataldi et al. and presents issues raised by its motions under three categories. For ease of referral, we have retained the party Wang et al.'s nomenclature.

1. Definition of the Issue

A. The party Cataldi et al.'s motion no. 32 to substitute proposed count 4 for the present count.

B. The party Cataldi et al.'s motion no. 1 to designate the party Burroughs et al.'s patent claims 1 to 11 and reissue claims 13 to 32, 34 to 36 and 38 to 51 as not corresponding to the count.

2. Patentability

A. The party Tucholski's motions for judgment that the claims of all parties are unpatentable over prior art.

B. Whether the party Burroughs et al.'s reissue claims 1, 3, 4, 7, 8, 13 to 23, 30 to 32, 41, 42, and 50 are unpatentable under 35 U.S.C. §§ 102/103, as urged in the party Wang et al.'s motion no. 6 (Paper No. 133).

C. Whether Burroughs et al.'s reissue claims are unpatentable on grounds of unpatentability for abandonment, dedication, or disclaimer and attempted recapture and for failure to comply with 35 U.S.C. § 251, as urged in the party Wang et al.'s motion no. 3 (Paper No. 130).

D. Whether Burroughs et al.'s reissue claims 13 to 51 are unpatentable under 35 U.S.C. § 112, first and second paragraphs, and under 35 U.S.C. § 251, as urged in the party Wang et al.'s motion no. 7 (Paper No. 134).

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E. Whether Burroughs et al.'s claims are unpatentable under 35 U.S.C. § 112, second paragraph, and failure to comply with 35 U.S.C. § 251, as urged in the party Wang et al.'s motion no. 5 (Paper No. 132).

3. Other Motions

A. Whether the party Burroughs et al. should be denied the benefit of the filing date of its patent for failure to meet the requirements of 35 U.S.C. § 112, first and second paragraphs, and for failure to comply with 35 U.S.C. § 251, as urged in the party Wang et al.'s motion no. 4 (Paper No. 131).

B. The party Cataldi et al.'s motion no. 23 that the party Burroughs et al.'s reissue claims are unpatentable for double patenting.

C. The party Burroughs et al.'s motion under 37 CFR §§ 1.635 and 1.662(b) that the party Cataldi et al.'s claims are unpatentable.

4. Additional Issue

In Interlocutory Order No. 10, consideration of the party Wang et al.'s miscellaneous motion no. 20 (Paper No. 656) to compel the party Burroughs et al. to produce Messrs. Burroughs and O'Kain for examination on oral deposition was deferred to final hearing provided that the party file a paper within five days after final hearing requesting consideration of the matter.

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Such a paper (Paper No. 792) was filed. Accordingly, the following additional matter is also before us:

A. Whether the miscellaneous motion no. 20 to compel should be granted.

OPINION

Issues Entitled to Consideration

Interlocutory Order No. 9, Section VI (page 17), identifies the motions filed by the party Wang et al. to be considered at final hearing. These are the party Wang et al.'s motion nos. 3 to 7, which are raised in issues 2B to 2E and 3A. The motions raised by issues 1A, 1B, 2A, 3B and 3C are not entitled to any consideration since the motions were not identified in the interlocutory order. Accordingly, the motions entitled to consideration are those raised in issues 2B to 2E, 3A and 4A.

Issue 2B

Issue 2B concerns the party Wang et al.'s motion no. 6 that the party Burroughs et al.'s claims are unpatentable over prior art. The argument concerning this motion appears in the party Wang et al.'s main brief at pages 30 to 66. Motion no. 6, which appears on pages 134 to 158 of the party Wang et al.'s record (WR 134 to 158) urges the following grounds for unpatentability:

1. Burroughs et al.'s claims 13 to 23, 30 to 32, 41 and 42 are unpatentable under 35 U.S.C. § 103 as being obvious over Kiernan, U.S. Patent No. 4,723,656 (the party Wang et al.'s exhibit no. 22

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(WX 22)), in view of Kameda, U.S. Patent No. 4,421,958 (WX 7) and Sterling, U.S. Patent No. 1,497,388 (WX 10). [WR 138 to 140]

2. Burroughs et al.'s claims 13 and 30, as amended, are unpatentable under 35 U.S.C. § 103 as being obvious over Mullersman, U. S. Patent No. 4,379,816 (WX 21) or Sterling (WX 10) in view of Kiernan (WX 22). [WR 141 to 142]

3. Burroughs et al.'s claims 16 to 18 and 20 to 22 are unpatentable under 35 U.S.C. § 102 as being anticipated by Kiernan (WX 22). [WR 142 to 146]

4. Burroughs et al.'s claims 19 and 23 are unpatentable under 35 U.S.C. § 103 as being obvious over the combination of Kiernan (WX 22) and Parker, U.S. Patent No. 4,006,414 (WX 11). [WR 146 and 147]

5. Burroughs et al.'s claims 1, 3, 4, 7 and 8 are unpatentable under 35 U.S.C. § 103 as being obvious over prior art, i.e., Kiernan (WX 22) modified by Iwai et al., U. S. Patent No. 4,456,798 (WX 8), Kameda (WX 7), Dulen, U.S. Patent No. 4,324,962 (WX 9) and Sterling (WX 10). [WR 147 to 155]

The party Wang et al.'s arguments in the brief and motion no. 6 are premised on our making the following findings of fact:

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Page 35 of the brief urges that Sterling "teaches the need for a switch when a tester is attached to the terminals of a battery."

Page 35 of the brief urges that the "nature of the Kiernan et al. tester would require a switch in a multi-layer device such as the switches disclosed in Kameda."

Page 42 of the brief urges that Sterling discloses a voltage indicator, which has an electrical switch means on the side of the battery.

Motion no. 6 is denied for essentially the reasons that we set forth in our Final Decision (Paper No. 801) with respect to the party Tucholski, wherein we denied its preliminary motions (Paper Nos. 81 and 666) and for the reasons set forth in the party Burroughs et al.'s opposition brief (Paper No. 763).

In the aforementioned final decision, we held that the party Tucholski did not sustain its burden of proof to show that the Burroughs et al.'s claims corresponding to the count are unpatentable over Kiernan (WX 22), alone or in combination with Sterling (WX 10). In so holding, we made several findings of fact. On page 15 of the decision we found that the Kiernan patent fails as an anticipation of the party Burroughs et al.'s claims because the patent does not disclose either a battery strength indicator attached to the side of a battery housing or

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any type of switch attached to the side of the battery housing. On pages 21 and 22 of the decision, we found that the Sterling patent does not disclose the particular indicating device of the party Burroughs et al.'s claims and does not teach or suggest the use of a switch.

Our findings are contrary to those upon which motion no. 6 is premised. Consequently, since the grounds of unpatentability urged against the Burroughs et al. claims are premised on findings which we did not make, the party Wang et al. has not sustained its burden to show that the Burroughs et al.'s claims are unpatentable.

For the foregoing reasons, motion no. 6 is denied.

Issue 2C

Issue 2C concerns the party Wang et al.'s motion no. 3 which appears at WR 22 to 35. The motion urges that the party Burroughs et al.'s claims are unpatentable as drawn to subject matter which was abandoned, dedicated, or disclaimed as a matter of law upon the grant of the party's involved patent, without the filing of a divisional or continuation application thereto. The motion also urges that the presentation of the reissue claims is an attempted recapture of deliberately canceled claims and misuse of the reissue statute for hindsight reconstruction, as an application for such subject matter has been determined not to be

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such error as is encompassed by 35 U.S.C. § 251. To the extent that motion no. 3 raises the same grounds for unpatentability as raised by the party Cataldi et al.'s motion no. 24, motion no. 3 is denied for the reasons set forth in the Final Decision (Paper No. 802) with respect to the party Cataldi et al.

To the extent that motion no. 3 urges that the party Burroughs et al.'s claims are unpatentable as drawn to subject matter which was abandoned, dedicated, or disclaimed, the motion is denied. As the moving party, the party Wang et al. has the burden of proof by a preponderance of the evidence on the motion. Kubota v. Shibuya, 999 F.2d 517, 519, n.2, 27 USPQ2d 1418, 1420, n.2 (Fed. Cir. 1993). The party Wang et al. has not sustained its burden of proof since it has not analyzed each of the reissue claims vis-à-vis each claim canceled during ex parte prosecution of the party Burroughs et al.'s involved patent. Nonetheless we have reviewed the claims canceled during ex parte prosecution and we are not persuaded that the party Burroughs et al. has attempted in its reissue application to recapture subject matter canceled during the original prosecution of its patent. We agree with the party Burroughs et al. that its reissue application contains claims, which are narrower or materially different from the canceled claims.

For the foregoing reasons, motion no. 3 is denied.

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Issues 2D, 2E and 3A

These issues concern the party Wang et al.'s motion nos. 4, 5, and 7, which appear at WR 74 to 81, 101 to 108, and 210 to 235. These motions urge that the party Burroughs et al.'s reissue claims 13 to 51 are unpatentable under 35 U.S.C. § 112, first and second paragraphs, and under 35 U.S.C. § 251.

These motions urge the same grounds for unpatentability as urged by the party Tucholski in its preliminary motion (Paper No. 82) for judgment and by the party Cataldi et al. in its preliminary motion nos. 2, 3, and 24 and are denied for the reasons set forth in the Final Decision (Paper No. 802) with respect to the party Tucholski's motion and in the Final Decision (Paper No. 803) with respect to the party Cataldi et al.'s motions.

Since we have held that the Burroughs et al. reissue application complies with 35 U.S.C. § 112, first and second paragraphs, and 35 U.S.C. § 251, no basis exists to deny Burroughs et al., as the reissue applicants, the benefit of the filing date of its involved patent.

For the foregoing reasons, motion nos. 4, 5, and 7 are denied.

Issue 4A

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Issue 4A concerns the party Wang et al.'s miscellaneous motion to compel the party Burroughs et al. to produce Messrs. Burroughs and O'Kain for examination on their declaration which was presented during ex parte prosecution and which is not being relied upon by the party Burroughs et al. The motion is denied.

If a party believes that additional evidence in the form of testimony, such as that of an opponent's witness, is necessary to support a preliminary motion, the party is required by 37 CFR § 1.639(c) to describe the nature of the testimony as specified by 37 CFR § 1.639(f). We fail to find where the party Wang et al. asserts in any of its preliminary motion nos. 3 to 5 and 7 that the testimony of Messrs. Burroughs and O'Kain on their ex parte Rule 132 declaration is necessary in order to decide those preliminary motions or where the party Wang et al. made a showing in accordance with 37 CFR § 1.639(c) and (f) in any of those motions. Nowhere does the party Wang et al. state in its miscellaneous motion that such a showing in accordance with 37 CFR § 1.639(c) and (f) was made in any of the preliminary motions. It is not appropriate for a party filing a preliminary motion, which does not state that the testimony of an opponent's witness is necessary to decide the motion, to now request the testimony of the witness. Cf. Hanagan v. Kimura, 16 USPQ2d 1791, 1794 (Comm'r. Pats. 1990).

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For the foregoing reasons, the motion to compel is denied.

REMAND

The interference is remanded to the APJ in charge of this interference for further proceedings not inconsistent with this order.

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